

Agriculture Trends in Recent Times

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ARTICLE ID: 06

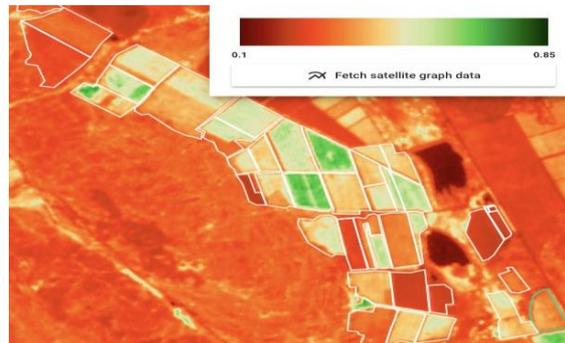
Introduction

Agriculture is considered to be the most important sector for any country including India. It is an economy based sector that involves more than half the population of the country. Indian agriculture and Indian farmers play an essential role in life of every commoner. In this regard, the Indian government and people follow many steps for the growth of agriculture sector. As a result, agriculture today has become an emerging sector with the latest trends.

The latest trends in agriculture have increased the Indian food production with time. It has made us self-reliant and a net exporter of agricultural products thus prevented us from becoming a begging bowl for food after independence. As per the Second Advance Estimates for 2019-20, the total country's food grain production was estimated to be 291.95 million tonnes. However, the Indian Council of Agricultural Research (ICAR) forecasts that the demand for food grains will increase to 345 million tonnes by 2030. Hence there is a need for development of new technologies to meet the increasing food demand. Recent trends in Indian agriculture involve new technologies and developments occurring in recent years in the agriculture sector. Certain recent trends identified in agriculture are as below

1. Increased Use of Aerial Imaging

A satellite or a low altitude aircraft, such as a plane or a drone are used to capture Aerial images. The spatial resolution of the image depends on the camera and the height of flight of the aircraft. Higher the resolution of the image, the more expensive the product will be. The main advantage of aerial imagery is its ability to provide a bird's eye view of the farm. A single image provides access to rich data about crops on field without having to step out. However, there is a need, to be able to interpret the information to make proper use of data.



More farmers have adopted the aerial imaging for better management of the crops in recent times. Satellite imaging and drone technology allow farmers to see variations and problems that are difficult to spot from the ground view. When this imagery data is coupled with precision farming technology, farmers will be able to manage their crops more accurately, resulting in increased profits.

Regenerative Agriculture

Due to concerns about climate change and weather versatility, organizations and individuals are shifting to adopt regenerative agriculture practices. This broad term refers to practices that increase soil carbon sequestration, by following reduced tillage and the use of cover crops. While there is a debate whether the regenerative agriculture will be a solution for climate change mitigation, the scientists are in an agreement that these practices increase soil health and fertility.

Regenerative agriculture uses a variety of sustainable agriculture techniques in combination. The practices include recycling of farm waste and addition of compost material. Regenerative agriculture on small farms and gardens is often performed using techniques like permaculture, agroecology, agroforestry, restoration ecology, keyline design, and holistic management. Large farms tend often use "no-till" and/or "reduced till" practices.



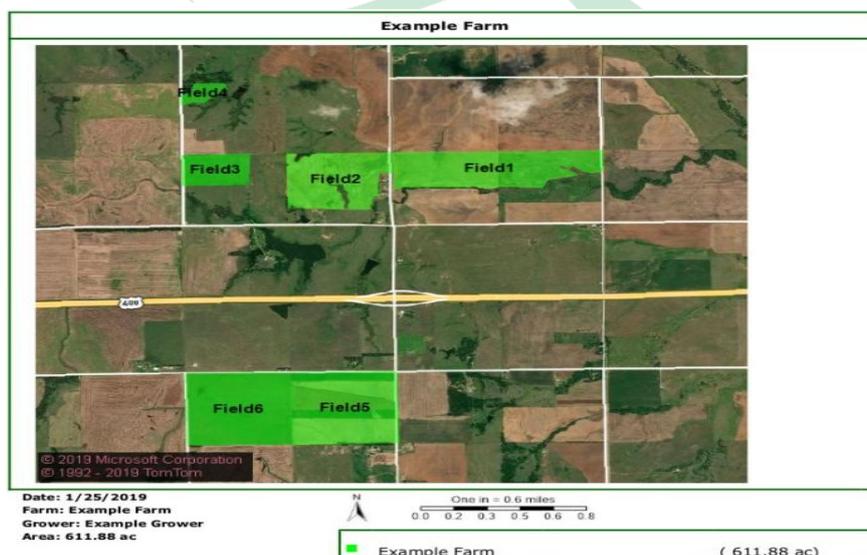
Investments in Indoor Farming

Startup companies receive immense support for the indoor production of commodities such as lettuce and tomatoes. Recently the vertical farming startups are aiming to utilize sensors and protective culture to produce vegetables in small closed spaces in urban areas.



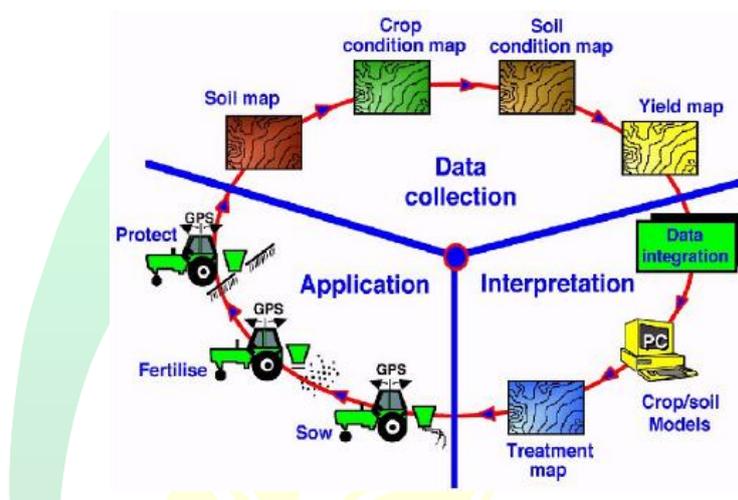
Field Mapping

GPS receivers collect Location information for mapping of field boundaries, roads, irrigation systems, and problem areas in crops such as weeds or diseases. The accuracy of GPS allows farmers to create farm maps with precise acreage for field areas, road locations and distances between points of interest. According to Business wire, the global digital agriculture market was expected to record a CAGR of 9.9% by 2020-2021, and field mapping will see the largest growth. It's no surprise, since field mapping allows for more accurate planting, spraying, and harvesting.



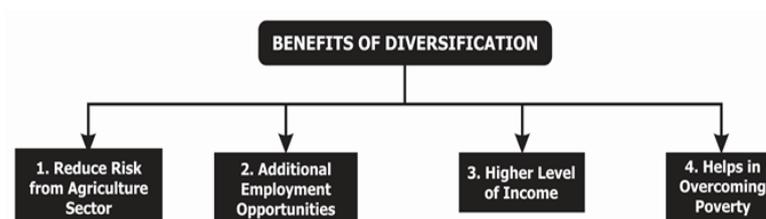
Data Integration

Even if you have information about yields, input costs, soil type, and weather conditions, integrating this data is key to putting it to use. Data management software will allow farmers to leverage this data to inform their decision making. Plus, this data can be used in real-time to make adjustments such as altering planting depth based on available moisture.



Agricultural Diversification

Agriculture fulfils various developmental needs along with the demand for food grains. In recent years, the farming industry has been diversified to produce commercial and horticultural crops such as fruits, vegetables, spices, cashew, areca nut, coconut, flowers, orchids, dairy and animal husbandry products. The demand for these products is ever increasing. The liberalization of the economy has created ample scope for the development of the agricultural sector in terms of production and trade.



Raising the Production of Food grains:

India has been experiencing the increase in the production of food grains particularly after the introduction of Green revolution in agricultural practices. Annual growth rate of 2.08 per cent was recorded during the 1970's. Annual growth rate of 3.5 per cent in food

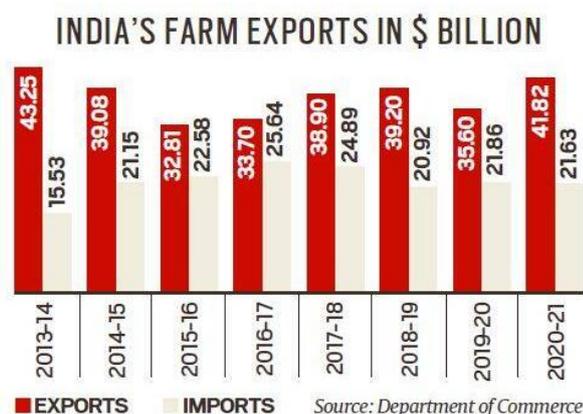
grains during 1980s was the hallmark of the green revolution that enabled India to become self-sufficient in food grains and also a marginal exporter.

This pace could not be maintained during the 1990's as the annual growth rate has fallen to 1.7 per cent which was almost equal to annual population growth. As per the official data sheet, our country has achieved food grain production of 296 million tonnes (MT) in 2019-20 and is to achieve 300 MT of production during 2020-21. With the increase in size of population and increase in income, the demand for food grains is likely to rise in near future.

Agriculture Exports

India is considered as the biggest exporter of agricultural products. Hence, it is one of the important emerging trends in agricultural marketing under liberalization. Due to the deregulation, the volume of agricultural exports is growing under the WTO's rule. India is in a favourable position in terms of agricultural exports as the agriculture sector is subject to low import material, low cost of labour, good climatic conditions and low cost of inputs.

Agriculture exports play a very important role in the growth of the country's economy. Further, it has increased the employment opportunities and diversification of agricultural operations.



Developing New Biological Techniques

During the Green Revolution, the increased application of chemical fertilizers and pesticides was encouraged on a large scale to meet the growing demand for food by the increasing population. In order to avoid further damage to the environment and the agriculture sector, there is an increasing emphasis on the use of biological technology for agricultural operations, and more emphasis is being laid on developing new organic



technology. These are recent trends in agriculture that can increase agricultural production and improve the environmental conditions. These trends help to improve the economic conditions of farmer and also give employment to the younger generations. In addition, they make the future agriculture in India brighter and more successful.

