**Project Name : INDIA’S AGRICULTURE CROP PRODUCTION ANALYSIS(1997-2021)**

**I DESCRIPTION :**

Agriculture is an important sector in India. It is indispensible for the sustenance and growth of the Indian economy. On an average, about 70% of the households and 10% of the urban population are dependent on agriculture as their source of livelihood. Today, India is a major supplier of several agricultural commodities like tea, coffee, rice, spices, oil meals, fresh fruits, fresh vegetables, meat and its preparations and marine products to the international market. India is a large producer of several agricultural products. In terms of quantity of production, India is the top producer in the world in milk and second largest in wheat and rice. Agricultural production is prone to several risks which affect both producers and consumers. In order to enhance investment and achieve a sustained increase in production, coherent and integrated long-term strategies and policies are required to reduce risk aversion and build flexibility among Indian rural producers. There is a need to provide remunerative prices for farmers in order to increase the incomes of farmers. In this research paper researcher’s objective is to study the major agriculture crops production, export and import of agriculture crop wheat.

**II BUSINESS REQUIREMENTS**

**Land preparation :**

Land preparation is the first operation in ensuring that crops can achieve the best yields. It is essential to provide plants with the best soil conditions for their development. A proper seedbed should be prepared with the right nutrients and conditions that can allow, first of all, seed sprouting and then the crop's establishment for its later development. Traditionally, this has been done with aggressive practices such as ploughing, slash and burning, etc. These practices are not only unsustainable in the long run, but they are labour intensive, especially in low mechanized contexts, and thus become a burden for small-scale farmers that have to prepare seed beds manually with basic tools.

FAO promotes alternative ways for land preparation, aiming to both reduce labour requirements and drudgery while at the same time trying to enhance the sustainability of land preparation activities. Reduced tillage and the use of adequate tools and equipment can contribute to this common goal.

The tasks of land preparation and weeding can be made less labour intensive through the use of improved hoes, row planting, draught animal powered rippers, harrows and planters. Single axle tractor equipment is a specific option that can be used if there are appropriate service-infrastructures and farmer capacities and when economic and social conditions permit it. Other tasks related maintaining soil cover and preparing the land can be done with weed wipes and adequate spraying technology which eliminate the task of weeding to a large extent. This should be done within reduced or minimum tillage systems, such as raised beds, and conservation agriculture.

**Crop operations :**  
 Several operations determine a crop's performance, including seeding and weeding. Adequate seeding rates, spacing and placement are crucial for the development of the plant. This is also influenced by soil conditions and the cropping system. From manual broadcast seeding to precision pneumatic seeding, there is a wide range of tools and equipment that can improve seed operations in the specific socio economic and environmental context of farmers.

The combination of reduced tillage and direct seeding, when applying Conservation Agriculture principles, contributes to preserving soil conditions and enhancing seed placement. There are seeders and planters that can be used under reduced tillage conditions, such as manual hand planters, animal traction direct seeders, two wheel tractor seeders and planters (adapted to different crops), and four wheel tractor pulled and attached direct seeders (with many types of designs and levels of sophistication). Reduction of drudgery and timeliness are immediate benefits of using direct seeding, these create opportunities for higher yields and uses of manpower for smallholder farmers.

**Weeding :**  
 Weeding by hand using traditional hoes takes about 140 hours for one person to weed one hectare (which falls to 65 hours per hectare by the third weeding). Weeding is conducted at critical times to avoid the establishment of weeds and crop damage. Late weeding of previous crops is done to prevent setting of weed seeds. The use of adequate tools and equipment can help accomplish the task faster and with less manpower, improving the livelihood of farmers and increasing the time efficiency. There are two ways of controlling weeds: mechanically or chemically. For the mechanical option, the aim is to uproot the weeds. While for the chemical, the aim is to kill weeds using a selective chemical agent that usually is sprayed.

* **III LITERATURE SURVEY**
* **Processor Architecture of IOT System :**
* Based on the research and analysis on IOT’s critical technologies, in the general techn Processor Architecture of IOT System Based on the research and analysis on IOT’s critical technologies, in the general technological system architecture of IOT, it ensures the size of IOT, mobility and security. Data collection layer consists of two-dimensional code tags and readers, RFID tags and readers, cameras, sensors, GPS, sensor gateways, sensor networks and other equipment and technologies. The layer of information exchange is based on network of IOT and communication technologies, such as mobile communication network and the Internet, which is a converged network formed by a variety of communication networks and the Internet. It includes information center, management center of IOT, expert systems and cloud computing platform. Application layer refers to solutions of integrating IOT technologies with industrial technical expertise to achieve a wide range of application with intelligent technologies. It consists of a variety of servers and its main functions include the collection, transformation and analysis of the gathered data as well as the adaptation and triggers.
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* **IV SOCIAL OR BUSINESS IMPACT**

**Challenges :**

Three agriculture sector challenges will be important to India’s overall development and the improved welfare of its rural poor:

* 1. Raising agricultural productivity per unit of land: Raising productivity per unit of land will need to be the main engine of agricultural growth as virtually all cultivable land is farmed. Water resources are also limited and water for irrigation must contend with increasing industrial and urban needs. All measures to increase productivity will need exploiting, amongst them: increasing yields, diversification to higher value crops, and developing value chains to reduce marketing costs.
* 2. Reducing rural poverty through a socially inclusive strategy that comprises both agriculture as well as non-farm employment: Rural development must also benefit the poor, landless, women, scheduled castes and tribes. Moreover, there are strong regional disparities: the majority of India’s poor are in rain-fed areas or in the Eastern Indo-Gangetic plains. Reaching such groups has not been easy. While progress has been made - the rural population classified as poor fell from nearly 40% in the early 1990s to below 30% by the mid-2000s (about a 1% fall per year) – there is a clear need for a faster reduction. Hence, poverty alleviation is a central pillar of the rural development efforts of the Government and the World Bank.
* 3. Ensuring that agricultural growth responds to food security needs: The sharp rise in food-grain production during India’s Green Revolution of the 1970s enabled the country to achieve self-sufficiency in food-grains and stave off the threat of famine. Agricultural intensification in the 1970s to 1980s saw an increased demand for rural labor that raised rural wages and, together with declining food prices, reduced rural poverty. However agricultural growth in the 1990s and 2000s slowed down, averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the 2000s. The slow-down in agricultural growth has become a major cause for concern. India’s rice yields are one-third of China’s and about half of those in Vietnam and Indonesia. The same is true for most other agricultural commodities.
* Policy makers will thus need to initiate and/or conclude policy actions and public programs to shift the sector away from the existing policy and institutional regime that appears to be no longer viable and build a solid foundation for a much more productive, internationally competitive, and diversified agricultural sector.

**DATA COLLECTION & EXTRACTION**

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