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### Short Communication

## **Farming System In India: A Brief**

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### **1. Introduction**

In India, farming systems are carefully used based on their best suited sites. The three farming systems that make up the majority of India's agricultural output are industrial, organic, and subsistence farming. The farming practices used by different regions in India vary; some are based on horticulture, ley farming, agroforestry, and many other practices. Because of India's geographic position, different regions have varying climates, which has an impact on the productivity of agriculture in each area. India's ability to produce abundant crops depends heavily on the monsoon cycle. India's agricultural history is longstanding, dating back at least 9,000 years. The ancient towns of Mohenjo-Daro and Harappa in Pakistan's alluvial plains along the Indus River appear to have established an organised farming urban culture. Known as the Harappan or Indus civilization, it existed until about after 4000 BP; it appeared earlier than similar cultures in northern China and was far more comprehensive than those of Egypt or Babylonia. At the moment, the nation is ranked second in the world for agricultural production. Over sixteen percent of India's GDP was derived from agriculture and other businesses in 2007. The largest industry in the nation and a major factor in the socioeconomic development of the nation, agriculture continues to steadily lose ground to other sectors of the economy. India is second in the world for producing groundnuts, wheat, rice, cotton, sugarcane, silk, and a host of other products. With 8.6% and 10.9% of the total harvest, respectively, it is also the second-largest harvester of fruit and vegetables. India is a large producer of bananas, papayas, sapotas, and mangoes. With 281 million animals, India is also the country with the largest amount of livestock worldwide. With 175 million cattle, the nation was home to the second-highest number of cattle worldwide in 2008.

### **2. Climate effect on Farming System**

Every Indian region has unique soil and climate conditions that make them ideal for particular kinds of farming. Farmers are typically limited to single cropping and farming techniques are constrained to cultivating crops that can resist drought conditions because many places in western India receive less than 50 cm of rain yearly. This climate is found in Gujarat, Rajasthan, Punjab, and northern Maharashtra; all of these regions cultivate suitable crops including bajra, jowar, and peas. On the other hand, the eastern part of India receives 100–200 cm of rain yearly on. All across India, three distinct kinds of crops are grown. Depending on which type grows best in a certain meteorological conditions, each variety is grown in a distinct season. Kharif crops are typically grown from June to November, from the beginning of the monsoon to the start of the winter. These crops include moong, urad, rice, corn, millet and groundnuts. Winter crops known as rabi crops are sown in October and November and harvested in February and March. Nuts, jowar, wheat, boro paddy, and other common examples are included. Summer crops, or Zaid crops, make up the third category. It is harvested in May or June after being sowed in February or March. Jute, veggies, and aush paddy are a few examples.

### **3. Irrigation Farming**

Crops are cultivated by irrigation systems, which deliver water to the land via rivers, reservoirs, tanks, and wells. India has seen a threefold increase in population in the past century. The increased need for food due to a growing population makes water an essential resource for agricultural productivity. India has a difficult task ahead of it: in the next 20 years, it must increase its food output by more than 50%. Water is essential to achieving sustainable agriculture. Nearly three-fifths of India's grain crop comes from irrigated land, which is consistent with empirical evidence indicating irrigation is mostly to blame for the country's increased agricultural productivity.

#### 4. Problems Of Irrigation

Numerous initiatives, including the Indira Gandhi Canal project, advanced slowly due to a lack of funding and technical know-how. The civil unrest in Punjab throughout the 1980s and early 1990s was partly caused by the central government's massive water transfers from Punjab to Rajasthan and Haryana. Issues have also emerged due to the depletion of groundwater supplies utilised for agriculture. Drawing water from one region to irrigate another frequently results in increasing salinity.

#### 5. Types of Farming System

##### *1-Ley Farming*

The need for grain, fodder, and fuel wood is rising in the Indian dry zone due to an increase in both human and animal population. The poor availability of vital mineral nutrients and the low and variable rainfall (100–400 mm yr<sup>-1</sup>) in this area contribute to the low level of agricultural productivity. The only way to meet these demands is to increase the amount of these Aridisols produced by using farming practices that enhance both the biological and physical characteristics of these soils. In order to save the soils from further deterioration and to increase sustainable crop yield at minimal input levels, alternative farming techniques are being investigated. Ley farming is a technique used in the drylands of India to replenish soil fertility. It entails changing out feeding grains and grasses in a particular area. Organic farming is currently being encouraged considerably more, particularly in the drylands. Ley farming provides crop insurance against the damaging effects of recurrent droughts. Using alternative agricultural systems, tillage, or management techniques can alter the structurally connected physical attributes and biological processes of the soil. Improving the biological activities that occur naturally in the soil can help to maintain and improve soil fertility. Farming facilitates the steady turnover of organic materials in the soil, which supplies balanced nourishment for sustainable output.

ty because irrigation systems are either poorly managed or poorly planned, which leaves an abundance of water and crops that are flooded and unable to produce.

##### *2-Plantation Farming*

The large-scale production of a single cash crop on plantations of estates is the defining feature of this vast economic enterprise. Due to the capital-centered nature of the economy, technological sophistication and effective farming techniques, together with irrigation, fertiliser, and transportation infrastructure, are critical. The tea plantations in Assam and West Bengal, the coffee plantations in Karnataka, Kerala, and Tamil Nadu, and the rubber plantations in Kerala and Maharashtra are a few examples of this kind of farming.

##### *Forestry*

Tree plantations are usually grown as even-aged monocultures, particularly for lumber production, as opposed to a naturally regenerating forest. It's also possible that some tree species seen on these plantations are not native to the region. In the future, it's possible that they'll contain unusual tree varieties including hybrids and genetically engineered trees. Because of their quick development, ability to withstand rich or degraded agricultural soil, and capacity to yield vast amounts of raw materials for industrial use, plantation owners will cultivate trees like pine, spruce, and eucalyptus that are best suited for industrial applications. In ecological terms, plantations are usually young forests; thus, these woods lack the kind of growth, soil, or biodiversity that is typical of old-growth natural ecosystems in a forest.

Social issues have also arisen as a result of the replacement of natural forests with tree plantations. When natural forests are replaced with plantations, there may be little thought given to the rights of the local populace in certain nations. The local population receives far fewer services from these plantations because they are designed only for the production of a single good. India has limited the quantity of land that an individual can acquire in order to prevent this. Smaller plantations are therefore run by nearby farmers who sell the timber to bigger businesses.

##### *Teak and bamboo*

Plantations of teak and bamboo in India offer farmers in central India, where conventional farming is prevalent, an excellent substitute crop. Since teak and bamboo plants only need water for the first two years of their lives, many farmers have developed teak and bamboo plantations as a result of rising farming input prices. Once planted, bamboo yields to the farmer for fifty years until it blossoms. These two trees' production both helps and exacerbates India's climate change issue.

##### *3-Dairy Farming*

With 84 million tonnes of milk produced in 2001, India overtook all other countries as the global leader in this field. India produces over 75 million tonnes of dairy products, approximately three times as much as the US. In India, dairy farming is typically a kind of subsistence farming, particularly in Haryana, which is the nation's top milk producer. Milk production accounts for about 40% of farming households in India, as it is a livestock enterprise that they can easily participate in and

enhance their standard of living. They can transition from subsistence to a market-based income through regular milk sales. Global changes in the livestock industry's structure are endangering poorer livestock producers since they will be forced out of the market. Global changes in the livestock industry's structure are endangering poorer livestock producers since they will be pushed out and left behind. Developments in the dairy industry will have a significant impact on the livelihoods of nearly 40 million households in India who depend on milk production, as well as the degree of rural poverty in the country. In order to evaluate potential changes in the Indian dairy industry and to identify broad areas for interventions that support small-scale dairy producers, Haryana was selected. The effects of changes in milk pricing, farm management, and other market factors that impact small-scale milk production systems, the entire farm, and associated household income were investigated using a technique created by the International Farm Comparison Network (IFCN).

#### 4-Co-operative Farming

The sharing of agricultural resources, such as insecticides, fertilisers, and tractor equipment, is known as cooperative farming. But unlike community farming, where land pooling is also used, it typically does not include it. In India, cooperative farming is still a relatively new concept. Its objective is to gather all of the farmers' land resources in a cohesive and well-organized manner so that they can plant crops on all of the land to the fullest extent possible given the fertility of the soil. An integral part of India's Five Year Plans is now this system. In India, cooperative farming has a lot of potential, even if the movement is still relatively new. In India, cooperative financing has advanced relatively slowly. The causes include fear of losing their job, a strong commitment to their land, a lack of effective propaganda, farmers' renunciation of their membership, and the existence of phoney societies.

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