

A COMPREHENSIVE REVIEW ON AGRICULTURE AND FARMERS EXPECTATIONS

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Abstract

Plant and livestock farming is the study, craft, and practice of agriculture. Agriculture was cornerstone to the rise of sedentary civilization of human, as domesticated species farming produced food surpluses that allowed persons to living in cities. Since India is an agrarian economy, agriculture area employments more than 51% of the total workers in India and contribute about 18 percent to the country's GDP so there is important to meet the expectations of farmer too so that they contribute to increases the GDP country. This paper focuses on agriculture like definition of agriculture, important of agriculture, agriculture biodiversity etc. This paper also focuses on issue that faces by the farmer and solution to overcome these issue. By bridging the divide between minor and significant enterprises, smart farming is predicted to have a massive effect on the agricultural economy in the future. The pattern isn't only relevant in established countries; emerging countries have too understood its significance.

Key words: Agriculture, Farmer, Government, India, Plants

Introduction

Agriculture was a central factor in the growth of sedentary human civilization, since it allowed people to live in cities by creating food surpluses from domesticated species. Agriculture has a long tradition dating back thousands of years. Farmers started planting wild grains about 11,500 years ago, after harvesting them for at least 105,000 years. Domestication of sheep, pigs, and cattle began over Ten Thousand years ago. Plants were grown separately in at least 11 different parts of the planet. In the twentieth century, industrial agriculture based on extensive monoculture came to dominate agricultural production, despite the fact that around two billion peoples still relied on survival agriculture.

Current agronomy, plant propagation, agrochemicals like fertilizers and pesticides, and technical advancements have dramatically amplified yields thus wreaking havoc on the environment. In a similar way, modern animal husbandry practices and selective breeding increased meat productions, but they also raised concern about animals welfares and environmental damage. Contributions of climate warmings, aquifer reduction, degradation growth hormone, and antibiotic resistance in commercial meats processing are also environmental concerns. Agriculture is also particularly vulnerable to environmental destruction, such as habitat depletion, desertification, soil degradation, and global warming, both of which result in lower crop yields. While certain genetically modified species are banned in some countries, they are widely used. Foods, fabrics, oils, and raw materials are the four main categories of agricultural goods (such as rubber). Cereals (grains), vegetables, oils, fruits, milk, beef, mushrooms, and egg are all food type. Agriculture employs over one-third of the world's workforce, second only to the service sector, despite a global pattern of declining agricultural jobs in recent decades, especially in developed countries where smallholding agriculture is being displaced by industrial agriculture and mechanization[1].

Importance Of Agriculture

They have lots of importance of agriculture some are given below[2]:

1) Source Of Livelihood:

Farming is the primary foundation of incomes for popular of citizens. Agriculture is a direct source of income for about 70% of the population. The lack of development in non-agricultural actions to absorb the increasingly rising population has resulted in this high fraction of agriculture. Furthermore, many people in developed countries not interested inside agriculture.

2) Involvement To Countries Revenue:

Agriculture is major source of production in most emerging countries. Agriculture, on the other hand, accounts for a smaller part of developed countries' national revenue. In most developed countries, agriculture is the primary source of revenue. Agriculture, on the other hand, contributes a lower proportion of national income to developing countries.

3) Supply Of Food As Well As Fodder:

Domestic animals require fodder, which is provided by the agricultural sector. People get milk from cows, that is kind of defensive food. Furthermore, livestock serves peoples dietary needs. Domestic animals need fodder, which is provided by the agriculture industry. People get milk from cows, that is kind of protecting food. Furthermore, livestock satisfies peoples nutritional needs.

4) Importance to International Trades:

Sugar, corn, tea, spices, coffee, tobacco, and other agricultural products are the main export of countries which depend on agriculture. Imports are reduced while exports rise significantly while agricultural production is smooth. This aids in the reduction of a country adverse stability of expenses also the saving of foreign currency. This money could be put to good use importing other necessary inputs, equipment, raw materials, and other infrastructure to aid the country economic growth.

5) Marketable Excess:

Agricultural area's expansion lead to marketable excess. As country expands, additional peoples work in construction, mines, and other not having agricultural sectors. Both of these peoples depends on foods processing, which they may get from the country's marketable excess. If agriculture industry develops, demand rises, resulting in an increase in marketable surplus. This is something that should be sold to other countries.

6) Foundation of Raw Materials:

The main foundation of raw material to main industries such as jute and cotton fabric, sugar, tobacco, eatable as well as non-eatable oil is agriculture. Several other sectors, for example fruit and vegetable processing and rice husking, depend heavily on agriculture for their raw materials. This raw sources are very important in daily life which is obtained by agriculture.

7) Importance in Transport:

Agricultural products are transported in bulk from farms to factories via highways and railways. External trade is mostly in agricultural goods. Furthermore, the government's revenue is primarily dependent on the success of the agriculture sector. The majority of agricultural good is shipped by highways, railways from farm to factory. External trade is mostly in agricultural goods. Furthermore, the government's revenue is largely dependent on the agricultural sector's success.

8) Foreign Exchange Resources:

The agriculture sector is a major contributor to the country's export trade. Agricultural goods such as jute, spices, tobacco, oilseeds, coffee and tea raw for example, account for about 19% of a country total export values. This shows that agricultural products are still a significant source of foreign exchange earnings for a nation.

9) Excessive Employment Chances:

Irrigation projects, drainage networks, and other agricultural-related activities are critical because they increase work prospects. Agriculture has a larger number of work vacancies than other industries. As a result, the high unemployment rate in developing countries, which is compounded by demographic growth, is diminished.

10) Economic Development:

Agriculture contributes to sustainable growth because it hires a large number of people. As a result, national wage levels and people's living standards have changed. The agriculture sector's rapid growth provides a progressive vision as well as improved impetus for development. As a result, it contributes to the creation of a favorable environment for a country's overall economic growth. As a result, the pace of agricultural growth determines economic production.

11) Foundation of Redeemable:

Agriculture development can also maximize savings. The affluent farmers of today began saving during the green revolution. This surplus sum could be put back into the agriculture sector to help it expand. Agriculture creation will help you save money. The affluent farmers of today have started to conserve as a part of green revolution. That money could re-invest in agriculture area to help it expand.

12) Food Safety:

A secure agricultural area ensures food safety for nation. Food protection is the most important prerequisite for every region. Food security helps to prevent malnutrition, which has long been considered one of the most serious issues confronting developing countries. The majority of countries depend on agricultural goods and related industries as their primary source of revenue.

Agricultural Biodiversity

Agricultural biodiversity is the creation of times of careful collection and innovative expansion on the part of farmers, herders, and fishermen [3]. Agricultural diversity encompasses all facets of biological diversity which are linked to foods and agriculture, as well as entirely aspects in biological diversity that prepare agricultural landscapes, also knowns agroecosystems: genetic, animal, and environmental diversity needed to sustain key habitat. Agricultural biodiversity influenced by hereditary resource relationships, nature, and farmer activities and management system . This is creation of times of natural selections mixed with humans creativity [4]. The following facets of agricultural biodiversity can be described:

1) Food & Agriculture Hereditary Capital:

Crops, native plants cultivated and preserved for farms trees, fruit, rangeland species, as well as pastures, and range land species, as well as fungal genetic and microbial wealth, are all examples of plant genetic wealth. Domesticated birds, wild and farmed fish, food-hunted wild animals, and other sea species are also examples of

animal genetic resources. These are the primary agricultural processing groups, which include domesticated and cultivated species, wild relatives of cultivated managed wild relatives plants, wild animals and domestic species.

2) **Biodiversity Component that Supports Ecosystem Service:**

Agriculture base environmental services are supported by biodiversity elements. At different scales, these organisms contribute to nitrogen cycle, insect and diseases prevention, fertilization, emissions and , hydrological cycles regeneration, residue regulation, flood regulator, environment regulation, as well as carbon sequestration. Genetic resources relationships, climate, and farmers' management systems and practices all contribute to agricultural biodiversity. These are product of centuries of natural evolution and human ingenuity working together.

3) **Abiotic Factors:**

Genetic source relationships, climate, and farmer management system and practice all contribute to agricultural biodiversity but they have lots of abiotic factor which effect the agriculture biodiversity. These include the local climatic and chemical conditions, as well as habitat physical structures and function, all have an effect the agricultural biodiversity. Genetic source relationships, the climate, and farmers management system and practice all contribute to agricultural biodiversity.

4) **Dimension of Socio-Economic and Cultures:**

Agriculture biodiversity is shape and preserved from human activity and organization methods, and a substantial number of peoples depends on it for a healthy livelihood. Local and traditional agricultural biodiversity's understanding, participating practices, social influences, and tourism associated with agricultural environments are all examples of such dimensions.

Problem Faced By Indian Farmer

Since India is an agrarian economy, the agriculture sector employs more than half of the total workforce and accounts for 17-18% of the country's GDP. We are a developing nation, and the majority of our people live in rural areas, where agriculture is their primary source of income. However, these rural people have been living the same way they did 30 years ago for decades. It's because agriculture is no longer a profitable business in India. Several issues have troubled Indian agriculture, all of which have an effect on a farmer's life, either directly or indirectly. In the whole method of extracting food and harvesting seeds, the problems faced by Indian farmers go unnoticed. The main issues, however, are a shortage of high-quality crops, limited and scattered landholdings, inadequate drainage, lack of mechanization, and a lack of warehouse or storage facilities. The major issue face by Indian farmer are shown in Figure1 and all details about this are given below[5]:

1) **Lack of Infrastructure in the Agriculture Sector:**

One of the major causes of lower agricultural production is increased river and canal contamination, which is mostly caused by high levels of industrial effluents and radioactive metals. India's agricultural sector lacks modern facilities, resulting in soil depletion and more land loss. In addition, improper fertilizer and pesticide usage results in nutrient deficiency in the soil, which is critical for agricultural production.

2) **Lack of Mechanization in Indian Agriculture:**

To dispel a common misunderstanding, increasing agricultural mechanization does not always imply large investments in tractors and other machinery. Depending on the job and who is doing it, farmers must select the best kind of supply to execute a certain activity. In most cases, women are responsible for the bulk of farm labor (80%). Ploughing the fields and sowing the seeds, irrigating and pruning, weeding and harvesting the crops are all done by hand for small and marginal farmers. As a result, there is a significant waste of human labor and reduced productivity per capita.

3) **Agricultural Marketing:**

Agricultural marketing is important not only for stimulating production but also for stimulating consumption. Its dynamic functions primarily aid in the promotion of economic growth, and it has also been identified as a key multiplier of agricultural development. Optimization of resource utilization and output production, increase in farm revenue, demand expansion, price signals and jobs, and addition to national income are only a few of the major improvements covered. Agricultural marketing also generates a variety of utilities, such as shape, location, time, and possession utility.

4) **Scarcity of Capital:**

This is major problem which is faced by the Indian farmer .Since agriculture is such a vital enterprise, it, like every other, necessitates resources. With the advent of agricultural technologies, the same feedback is becoming increasingly necessary. In India, however, farmers are more likely to sell their crop to the moneylenders from whom they lent money.

5) **Scarcity of Capital:**

Since agriculture is such a vital enterprise, it, like every other, necessitates resources. With the advent of agricultural technologies, the same feedback is becoming increasingly necessary. In India, however, farmers are more likely to sell their crop to the moneylenders from whom they lent money. In addition, illiteracy and a lack of knowledge about recent trends in Indian agriculture, as well as the farmers' low socioeconomic status, are contributing to the persistent decline in agricultural productivity. Inadequate and late funding, as well as contradictory government agendas, have exacerbated the issues.



Figure 1: There are five types of Problem Faced by Indian Farmer i.e.) Lack of infrastructure in the agriculture sector, **Lack of mechanization in Indian agriculture**, Agricultural marketing, Scarcity of Capital and Scarcity of Capital.

Ways To Decrease Farm Suffering In India

The ways for reduction in farm suffering in India are given below[6]:

1) **Increasing Incomes:**

In India, agricultural transition is very sluggish. As a result, the process of increasing agricultural income is also sluggish. The key goal was to boost output rather than raise wages. The plan by PM Narendra Modi to double farmers income by 2022 is a move in right directions. This will require a concentrated attempt to update technology by bolstering seed area and knowledges dissemination systems; agricultural diversification in service of high value crops and expansion of value chain by link manufacturing and market centers; finally, the establishment of mechanism to guarantee least support price in event of a farm harvest price crash. Progress can be measured by how farmer is aggregate for processing and distribution by the promotions of cluster farming contract farming, cluster farming and farmer producers groups.

2) **Producing Employment Chances:**

According to India's Situation Assessment, greater than 41% of farmer would similar for leaves agriculture if other option was open. Agriculture being overcrowded, there are few daily job openings. Due to a lack of daily employment opportunities in rustic areas, the rustic population, particularly the youths, is moving to urban areas in search of better chances and incomes. People aged 16 to 34 will account for 35% of India's populations by 2020; presently, more than 71% of India youth live in rustic area. Their zeal as well as energy must harnessed in way that achieve their goals while also transforming agriculture and rural economies. Agriculture, on the other hand, would be unable to accommodate the growing number of young people in rustic areas. **Falling**

3) **Risk in Agriculture:**

For years, threats that farmer faces have been rise. Agrarian distress is being exacerbated by both supply and market threats. Droughts, flooding, temperature swings, unseasonal rain and hailstorm are becoming more common, wreaking havoc on agricultural production. However, even in regular years, farm harvest prices have plummeted, wreaking havoc on farmer incomes. To offset any export costs, prime minister national agricultural insurance schemes is nowadays in operation. While this arrangement is beneficial, the coverage provided is inadequate and doesn't offset the possibility of market declines. The government propose establishing a "Prime Minister Climates Resilience Schemes," which would cover both supply & price risk. A strategy like this could combine climate clever agriculture promotion with values adds weather suggested service as well as successful farm insurance delivery, ensuring minimum support costs.

4) **Developing Agri-Infrastructure:**

Agri infrastructure, which includes cold storage, agricultural markets, agro-processing, as well as factories, have not progressed at the same rate as agricultural production. Agri-infrastructure development is lagging way behind what's wanted to strengthen the complete agri-food system. Previously, agricultural commodity production received more attention. The stock chain of agri-foods goods are inside the possession of an unorganized, fractured, and inefficient industry in nonappearance of sufficient Agri-infrastructure. Due to the lack of economic feasibility to grow agri-infrastructure, a better organized private area is increasingly developing. In building Agri-infrastructures for high financial as well as social advantages, public private partnership (PPPs) play a critical role. The government should set up a commission to establish public-private partnership modalities and recommendations in the agri-infrastructure market. The outstanding track record of PPP in building of national highway, the construction and operation of airport, the delivery of electricity, and other areas will teach us a lot. This can be used to build rustic Agri-markets, agro-processing, agricultural extension, surface irrigation, and additional Agri infrastructure components. Federal government was support individual states' attempts to create successful PPP programs.

5) **Improving Quality of Rural Life:**

Basic services are also lacking in rural India (such as sanitation, drainage, hygiene, drinking water, health centers, and schooling). 3 year ago, prime minister encourage each Members of state and Parliament legislatures for adopt a work and village to convert it into model villages. By providing all public amenities, the key goal was to increase the quality of life in rural areas. The Lt. President Abdul Kalam's proposal, Provision of Urbans Amenities to Rural Areas (PURA), seeks to provide urban facilities and service in rustic hubs to generate economic chances. The scheme should restored in order to raise the quality of living in rural areas. Also, several initiatives and scheme for building economic and social infrastructure should combined to better effect. To stimulate overall economic development, India's agriculture sector must be revived, and buying power at lowest of pyramid must be improved. This can only be accomplished by concentrating on important areas and putting services in place under one umbrella

Literature Review

They have various researcher who do the researches and studies about the mobile and ad hoc network. The few of analyzer and researcher and there researches and there studies are given below: Jacopo Bonan et.al studies the rate of adoption of productive agricultural technology in Africa remains poor, and the reasons for differences in

adoption choices among farmers are still unknown. They examine the decisions of Ugandan subsistence smallholders to embrace viable cash crops (oilseeds) that will enable them to migrate to commercial farming in their article. They examine the roles of farmer's interests in crops acceptance decision and extent for which ex-ante conclusions about crops profitability explain adoption using a randomized roll-out of national delay service programs. They found that farmers who underestimate the price of oilseeds at baseline are the most likely to accept new crops, and that randomly selected extension programs result in a 15% increase in oilseed adoption. As shown by how farmer refresh their belief after being unexpectedly provided with extensions programs, our results indicate that changes in expectations are a core factor of agricultural technology adoption[7].

Raphael Lencucha et al. studies in their paper by examines some of the variables that influence a sample of Illinois farmers' assumptions about their potential participation in agriculture. It explores the impact of current state in the agricultural profession on subsequent transition and aspirations, using one viewpoint that relates to occupational aspects of change. It examines the interplay of "push-pull" forces on aspirations for agricultural status adjustment, taking into account a variety of other factors. The findings suggest that aspirations are linked to a person's status in the agricultural industry. Among the "push" factors listed, farm size and income have a significant impact on expectations. Off-farm job was shown to be strongly linked to beliefs among the "pull" variables studied. The "pull" effect attributed to farm position is at best marginal, and the impact attributed to the farm operator's age and education is dependent on the farm's income level. The heterogeneity among part-time farmers is discussed, as well as the relationship between expectations[8].

Laurens Klerkx et al. studies different forms of digitalization of agriculture from technical or natural science perspectives. Social science investigators recently begun investigating different aspects of digital agriculture from a social science perspective. As a result, there is a growing yet dispersed form of social science literatures. As a result, a lack of understanding of how this area is evolving, as well as existing, emerging, and current trends and topics. Beyond announcing this special issue, which contains seventeen papers on the social, technological, and institutional dynamic of digital agriculture, precision farming, agriculture or smart farming, this is where this article aims to contribute. 4.0 out of 5[9].

A. J. Sofranko et al. studies among a survey of Illinois farmers, some of the variables contributed to assumptions about potential participation in agriculture. It explores the impact of current state in the agricultural profession on subsequent transition and aspirations, using one viewpoint that relates to occupational aspects of change. It examines the interplay of "push-pull" forces on aspirations for agricultural status adjustment, taking into account a variety of other factors. The findings suggest that aspirations are linked to a person's status in the agricultural industry. Farm size and income are two of the most important "push" considerations mentioned. Off-farm job was shown to be strongly linked to beliefs among the "pull" variables studied. The "pull" impact attributed to farm position is at best marginal, and the influence attributed to the farm operator's age and education is dependent on the farm's income level. The emphasis of the discussion is on part-time farmers' variability, the relationship between priorities and decision-making, and the ramifications of planned improvements for Extension efforts.[10].

The researcher studies and analyzed about the agriculture and farmers expectations but they did not explain well about the agriculture, importance of agriculture, agriculture problem faced by Indian farmer and solutions of their problem, etc. This paper gives all details about agriculture and farmers expectations like definition of agriculture, importance of agriculture and aspect of biodiversity. This paper also provide details about the problem faced by Indian farmer.

Discussion

The researcher studies and analyzed about the agriculture and farmers expectations but they did not explain well like the meaning of agriculture, definition of agricultures, agriculture significance, problem faced by Indian farmer and solutions of their problem, etc. This paper gives all details about agriculture and farmers expectations like meaning of plant and livestock which means a plant and livestock farming is the study, craft, and practice of agriculture importance of agriculture. Agriculture significance such as **and aspect of biodiversity**. This paper also provide details about the problem faced by Indian farmer such as (lack of

infrastructure in the agriculture **sector** , lack of mechanization in Indian agriculture, Scarcity of Capital **etc.**) and way to reduce farm stress in India such as (increasing incomes, generating employment opportunities, developing Agri-infrastructure etc.).

Conclusion

This paper gives all details about agriculture and farmers expectations like meaning of plan and livestock which means a Plant and livestock farming is the study, craft, and practice of agriculture agriculture significance. This paper also provide details about the problem faced by Indian farmer such as(lack of infrastructure in the agriculture sector , **lack of mechanization in Indian agriculture**, Scarcity of Capital **etc.**) and way to reduce farm stress in India such as (**increasing incomes, generating employment opportunities, developing Agri-infrastructure etc.**). By bridging the divide between minor and significant enterprises, smart farming is predicted to have a massive effect on the agricultural economy in the future. The pattern isn't only relevant in established countries; emerging countries have too understood its significance

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