

A CASE STUDY ON AGRICULTURE AND MANAGEMENT OF FOODSTUFF IN INDIA

Dr.Sireesha Nanduri¹, Latha K², Nayana Borah³

JAIN (Deemed-to-be University), Bengaluru, India

¹sireesha_n@cms.ac.in, ²dr.lathak@cms.ac.in, ³b.nayana@jainuniversity.ac.in

Abstract

The management of the foodstuff has become one of the major concerns now a days worldwide due to many critical situations like the COVID-19 pandemic and certain other critical situations happening worldwide. There have been conducted various studies on the effective management of agriculture as well as the management of the foodstuff pragmatically according to the demand and consumption properly. Many times, especially in crucial times and situations it is very hard to make a proper balance in the agriculture production and the consumption of the foodstuff according to the proper demand. In this paper, the authors conducted a study in order to effectively determine the food necessity according to the people requirement in order to resolve the existing issues related to the consumption of the food products. The agriculture sector in the Indian economy plays a very important role as a large number of people here works in the agriculture sector and mainly depend on agriculture from ancient times. This paper provides a detailed study on the agriculture growth, challenges, solutions and food production in India during the last decade..

Key words: Agriculture, Foodstuff, Farmers, Management, Production, Crop, Production.

Introduction

The agriculture sector is one of the largest sectors in India from ancient times and a large number of the population works in agriculture for livelihood. There has been done enormous changes and developments during last decade for improving the agricultural products growth in order to cover the consumption demand and the population is increasing day by day very rapidly [1]. Although several research has been done over last decade to effectively determine the food requirements according to the people but still there is a huge necessity to determine certain major parameters that rely on agriculture and depends directly on the foodstuffs. Recently, the Covid-19 pandemic that happened has affected people's lives due to very critical situations and many people faced numerous issues during this crucial time. The agricultural activities were also affected in this time and farmers faced a lot of issues related to proper monitoring of the crops efficiently, and due to that many crops was affected and the overall production rate was not optimal according to the consumption of food [2], [3].

The farmers faced a lot of problems during this lockdown period all over India and it was very difficult for them to go from one place to another inefficient manner including the farming machines such as tractors, combines from one place to another easily. Another very big challenge that was faced by a majority of the farmers was the unavailability of the required manpower for the labour work and this created a lot of problems [4], [5]. This national lockdown was basically coincided with the starting of the harvesting period for Rabi crops that further generated adversity in this sector. The agricultural system of India shows flexibility and openness in comparison to the other nation's agricultural systems that is one of the best things here. There were so many adversities in India during the lockdown period and multifarious people suffered a lot of trouble due to this in the lockdown period. Despite most of the challenges posed through COVID-19, the steady supply of agricultural products, particularly grains such as corn, grain, beans, as well as veggies, has been preserved, ensuring food security. Indian Government has taken many steps under the scheme namely Atma Nirbhar Bharat Abhiyan for further improvements and to sustain the agriculture field.

Table 1: Illustrates the major announcements by the Indian government in the various sector under the scheme of Atma Nirbhar Bharat.

Sl. No.	Announcements	Main objectives
1	Rupees 1.00 Lakh crores fund for the agriculture infrastructure	The financing is offered to give the funding agricultural infrastructure assignments at the initial farm-gate level.
2	10,000 crore rupees plan for the formalization of the Micro Food Enterprises.	Provided aid of 2 lakh rupees for the MFEs that demands more technical upgradation.
3	Rupees of 15,000 crores were allotted for the expansion of the infrastructure of Animal Husbandry	This initiative provides support to multifarious dairy farms to enhance the infrastructure of the animal's feed.
4	Pardhan Mantri Garib-Kalya Ann-yojna	Basically, this scheme was launched for food as well as nutritional security.
5	National disease prevention program for the cattle	This scheme's main objective was to prevent the foot and mouth disease of the cattle.
6	On-Nation and the One-Ration Card	It supports the migrant workers as well cardholder family members to acquire various benefits.

Table 2: Illustrates the shares of the farming as well as the allied sectors for overall GVA on the recent prices.

Sl.	Items	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
1	Shares of the GVA in agriculture sector/allied sectors	18.20	17.70	18.00	18.00	17.10	17.80
2	Fishing shares	11.20	10.60	10.60	10.40	9.40	-
3	Livestock shares	4.40	4.60	4.80	5.10	5.10	-
4	Forestry as well as the logging	1.50	1.50	1.50	1.40	1.30	-
5	Various crops shares	11.20	10.60	10.60	10.40	9.40	-

Table 1 shows the major announcements by the Indian government in various sectors under the scheme of Atma Nirbhar Bharat. According to the preliminary government revenue figures published also by Central Statistics Office (CSO) on May 29, 2020, agriculture, as well as related industries, account for 17.80% including the overall Gross Value Added (GVA) with market rates in 2019-20. Table 1 displays the GVA of food and agricultural industries, as well as their rate of growth, in the last several years. Table 2 shows the shares of the farming as well as the allied sectors for overall GVA on the recent prices. Figure 1 shows the various shares of the agriculture as well as allied sectors. Figure 2 shows the graph of the Gross Capital Formation (GCF) of the

agriculture as well as allied sector. Figure 3 illustrates the recent trends in agricultural products like wheat and rice. Figure 4 illustrates the recent trends in other agriculture products like Nutri and pulses.

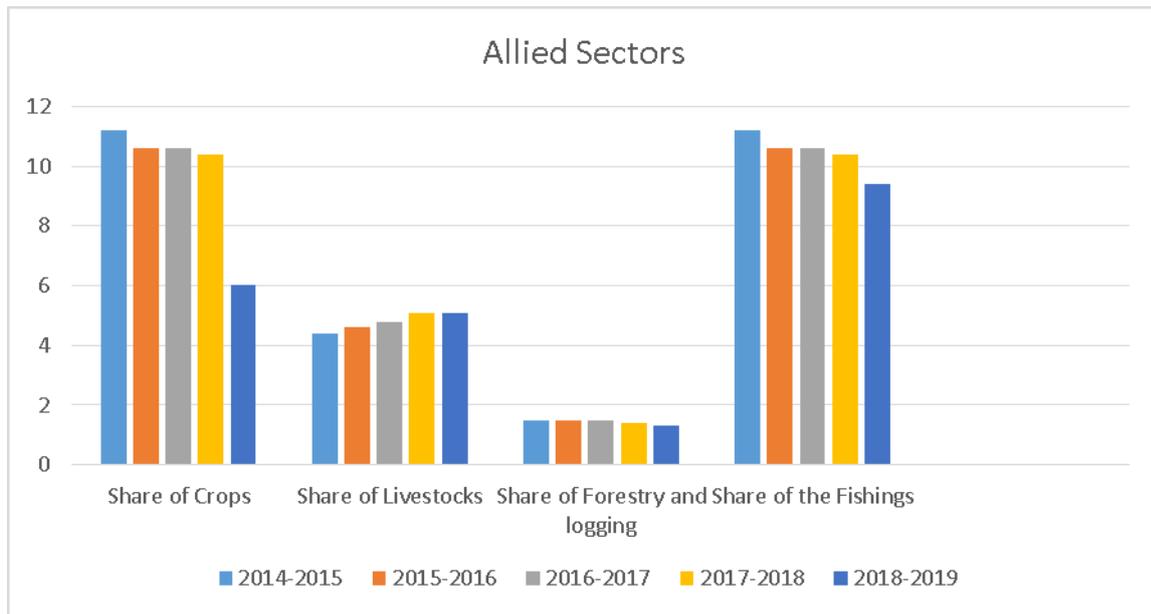


Figure 1: Illustrates the various shares of the agriculture as well as allied sectors.

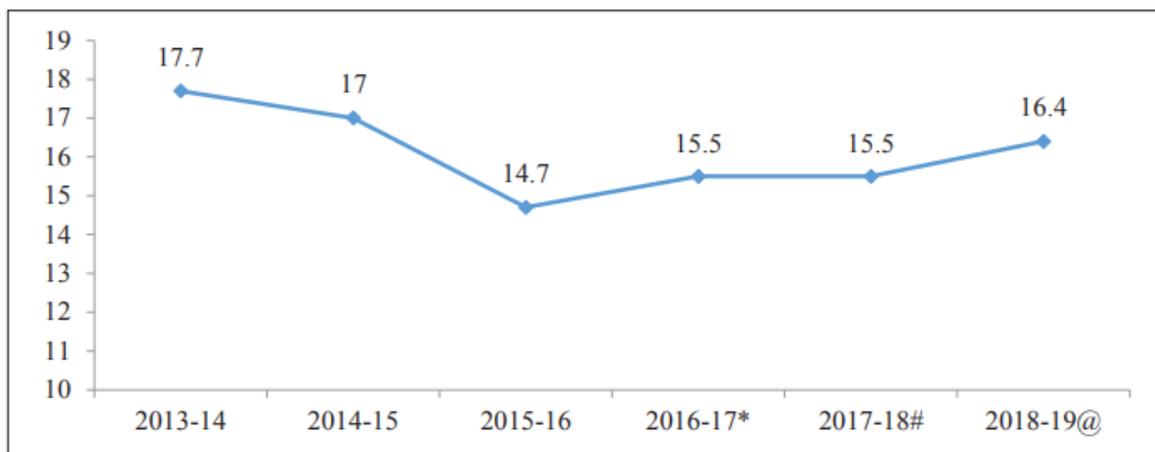


Figure 2: Illustrates the graph of the Gross Capital Formation (GCF) of the agriculture as well as allied sector [DAC&FW].

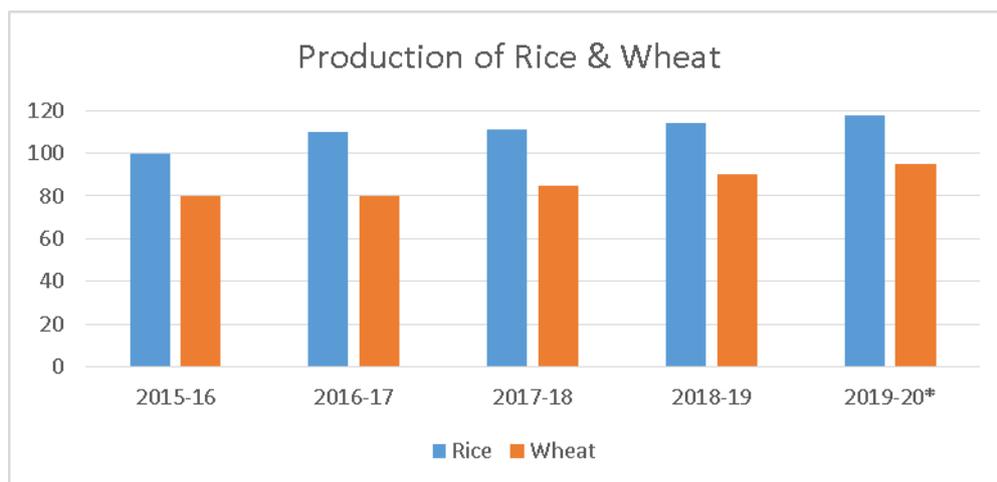


Figure 3: Illustrates the recent trends in the agriculture products like wheat and rice.

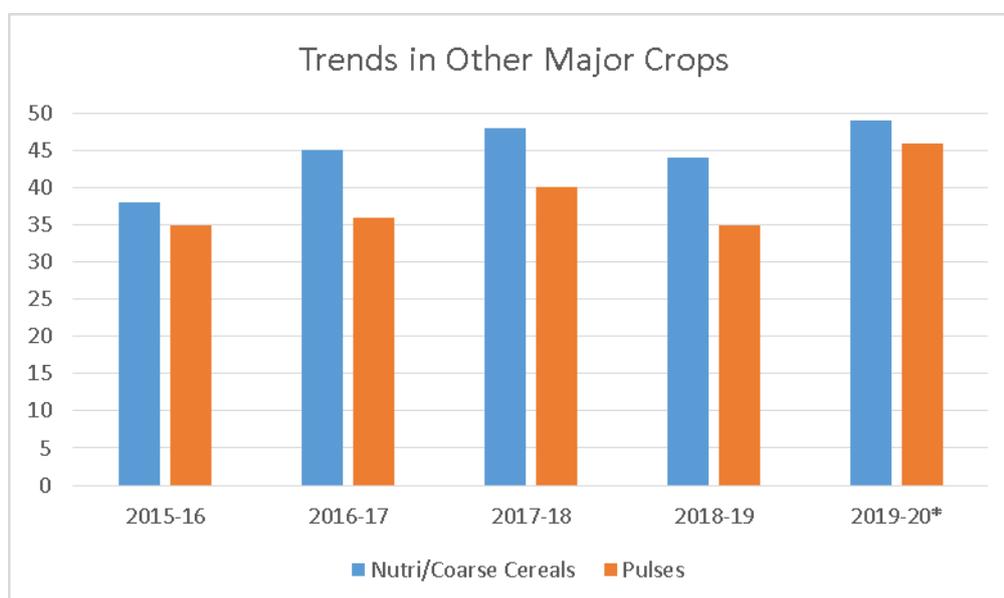


Figure 4: Illustrates the recent trends in other agriculture products like Nutri and pulses.

Discussion

For the development of the agricultural sector in India, central and state governments are launching numerous schemes for the farmers to support them financially and help them according to their demands and situation. There have been launched various schemes by government bodies during the last decade to improve the agriculture infrastructure in a pragmatic and fast manner as the Indian agricultural sector is one of the largest across the globe and a lot of people working in this sector since ancient times. Figure 5 illustrates the graph of the agriculture credit in India (latest prices). This data is provided by the Reserve Bank of India (RBI), to support the farmers by providing them multiple credit schemes from time to time across India. Figure 6 illustrates the graph of the loan report in India.

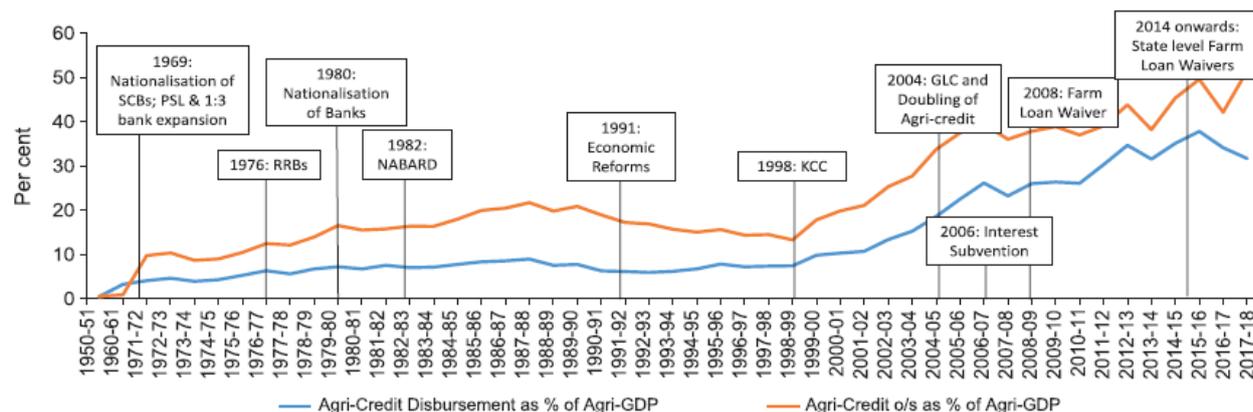


Figure 5: Illustrates the graph of the agriculture credit in India (latest prices) [RBI].



Figure 6: Illustrates the graph of the loans report in India [RBI].

Many research organizations in India are encouraging people for effective agriculture management in India. One of the most premier and famous organization is Indian Council of Agricultural Research (ICAR) that are working for a farmer in India and providing various necessary information about the farming to multifarious farmers in various states. This organization has conducted extensive research in the sector of agriculture to resolve the existing issues that are mainly related to the crop production rate and to increase the income of the farmers.

Table 3: Illustrates the major index of the adoption of multifarious technologies.

Sl. No.	Technology Adoption(in percentage)	Adoption Class
1	0.00-25.00	Very Low
2	25.00-50.00	Medium
3	50.00-75.00	High
4	75.00-100.00	Highest

A fundamental change is needed in how farming is perceived, from either a rural subsistence field to a global corporation. In this context, immediate changes in agriculture's output, as well as post-production, are needed to ensure stable and consistent progress. Increased cultivation area, the introduction of modified as well as

enhanced crops, increased variety substitution rate, as well as an expansion of crop test sites, can all help to resolve issues about low growth [6], [7].

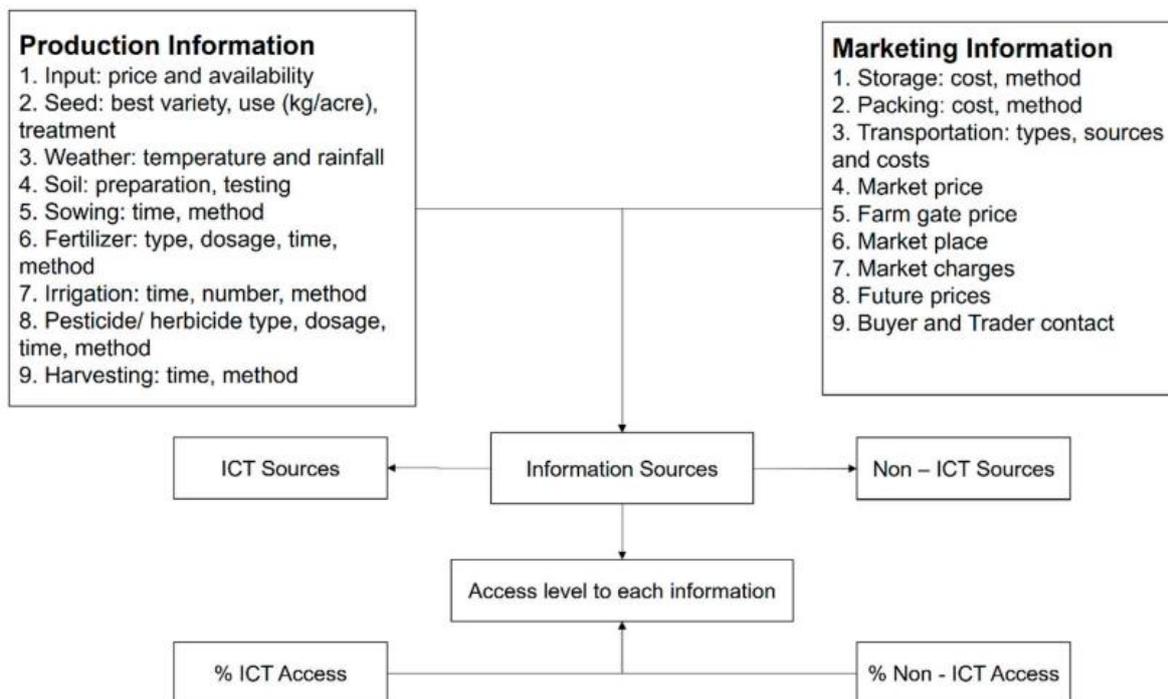


Figure 7: Illustrates the production information as well as the marketing information in a conceptual framework [9].

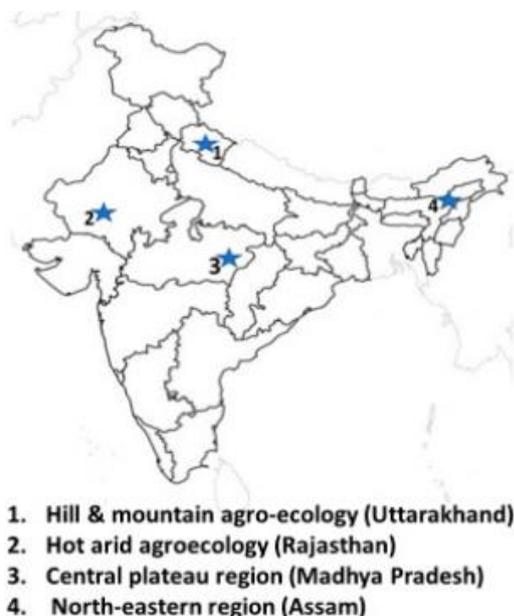


Figure 8: Illustrates the study locations demonstrating 4 different agroecologies of the Indian nation [10].

Following the industrial revolution, India gained great strides in crop yields, which was enabled possible by the introduction of modern agricultural practices, strong varieties of crops, fertilizer usage, increased irrigation capacity, as well as the supply of utilities. Vast numbers of the farming community dedicated to mentally and physically working to create such achievement possible. Table 3 depicts the major index of the adoption of

multifarious technologies. The agricultural sector is the cornerstone of the Indian market, but it is an important factor in the nation's capital accumulation. Agriculture is indeed a dynamic as well as vast business with a wide amount of persons. India is among the world's biggest although culturally dynamic farming development programs. India's crop research program comprises about 27,500 researchers and around one crore personnel who are directly involved in sustainable agriculture, making it the nation's biggest exploratory system [8].

The Ministry of Excise, Cultivation, as well as Trade, were established in 1871 as that an essential ministry of agriculture throughout India. While the council's primary role remains revenues and no research on crop output was undertaken, it did signal the colonial administration's acknowledgment and recognition of the farming sector. That effort, though, was not particularly important. Figure 7 shows the production information as well as the marketing information in a conceptual framework. Figure 8 illustrates the study locations demonstrating four different agro-ecologies of the Indian nation. India is indeed the world's leading and one of the biggest producers of agricultural products. It's really the world's biggest producer of grains as well as rice and pulses etc. Wheat production has historically been governed by India's northeastern states. Wheat has been abundant in India's northeastern states of Uttar Pradesh and Haryana Regions. Although the grain grass has long been researched, recent times of intensive study from India's top scientists have resulted in the growth of noticeably advanced Wheat Flour crops.

Conclusion And Implication

There has been carried out extensive research in the sector of agriculture in India during the last many years but there is a huge demand for more studies and investigation to determine the requirement of the foodstuff to avoid the critical situations in the country during any of the crucial situations such as the Covid-19 pandemic and many other emergencies. This case study provides a detailed analysis of the food production and current agricultural sector situations to determine the necessity of the food products according to the consumption. Moreover, this paper provides information about various government schemes launched by the central government as well as by multifarious state governments during the last decade and how the farmers got benefits to improve the overall productivity of the crops and to minimize the investments in the crops. Furthermore, this paper provides information about the agriculture credits situations in India according to the report of the RBI that offered to the farmers financial support. Although, there have been done various case studies in the field of agriculture in India but there is a huge demand for more research in order to provide pragmatic information about farming in India according to various state's land fertility in order to increase the overall production of the crops.

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