

CROP SYSTEM IN KOLAR DISTRICT OF KARNATAKA- AN ECONOMIC ANALYSIS

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Abstract

This paper attempted to study the cropping pattern in Karnataka and its implications as well as address the irrigation system in the Kolar regions. It also focuses on analyzing the production of irrigated and irrigated crops in the Kolar region. To achieve these goals the researcher has collected the necessary information from various data sources such as the 2011 census survey papers, journals, newspapers, magazines, websites, etc. the same information is analyzed systematically. After analysis, it concludes that India is an agricultural economy and the agricultural sector employs about half of the country's workforce and contributes about 16 percent of GDP during the 2016-2016 financial year. India has seen the movement of many farmers and is based on many issues and the demands of the movement have a local and temporary size. The 2011 census of the regional planting pattern shows that the agricultural sector of the Karnataka region is operating on traditional lines and traditional planting methods. Depending on the precarious rainfall, climate problems and lack of irrigation facilities are the main causes of the slow pace of modern development and trade in the state agricultural sector. Lack of better storage and marketing facilities, lack of institutional debt, lack of affordable prices are other important reasons for the slow pace of trade in the agricultural sector in government. It is found that under all ages the world is watered and untouched. The paddy crop covers 7096 hectares with 19234 tons of production. Rice crops are covered on an area of 7096 hectares with a production of 12830 tons per KG's harvest per 1903 hectare. 50637 hectares of land with a production of 68803 tons with a yield of KGs per 1430 hectares. Most of the uncultivated fields indicate interest in Raagi crop production.

Keywords: Cropping, Agricultural land, Irrigation, Production, Yield per hector

1. INTRODUCTION

Karnataka is divided into ten agricultural climates, taking into account rainfall patterns, soil types, texture, depth, physio-chemical structures, altitude, habitat, large vegetation, and plant species. The rich and diverse state of agriculture contributes 28.6% of the Gross State Domestic Product (GSDP) .1 64.6% of the country's agricultural land is cultivated and farmers and agricultural workers make up 56.5% of the Karnataka workers (Census 2001). Karnataka is a major producer of coffee, green silk, sandalwood, ragi (finger buffalo), sunflower, tomato, and the second-largest producer of Indian maize, safflower, grapes, pomegranates, and onions. Horticultural plants, which produce more than 13 million tons per year, contribute to more than 40% of agricultural income. In flower production, Karnataka takes second place in India.

70% of the Karnataka area is classified as desert or desert area. As of 2008-09, 32% of the arable land is irrigated. The agricultural land area is 66.1%. This includes cultivated residual land (55.1%), arable desert (2.3%), arable land (6.7), and other lands (2.1%). Cultivation depends heavily on rainfall in the south-west but spreads over more than three seasons:

- Kharif: July to October; Accounting for 70% of annual grain and oilseed production; Large crops are sorghum, paddy, maize, pulses, nuts, red peppers, cotton, soybeans, sugarcane, and Tumeric; Planted area of about 70 hectares lakh;

- Rabi: October to March; Counting 22% of grain per year and 15% of oilseed production; The main crops are wheat, barley, mustard, sesame, and peas; Planted area of about 30 hectares lakh;

- Summer: Includes 8% of annual food grain and 15% of oilseed production; Planted area of about 6 hectares lakh.

The state strongly follows the rice cutting pattern. Different crops instead of rice, rag, bajra, cotton, nuts, jowar, and maize.² Other important crops are wheat and small grains and pulses such as tur, Bengal gram, horse gram, black gram, green gram, cowpea, etc. Oilseeds include nuts, sesame, sunflower, soybeans, and sunflowers. Commercial crops include sugarcane in the eastern region, cotton in the northwestern region, and tobacco. Cashew, coconut, areca nut (southern region), cardamom, and peppers are other important plants. The Western Ghats are well-known for their coffee and tea plantations while maize is widely grown in the northern region of the region. Due to the climate, the coastal region is well suited for the cultivation of orchards. The paddy field, maize, pulses, sugarcane, and tobacco have recorded amazing growth over the past 50 years. While paddy grew from 10.28 lakh ha in 1961 to 15.1 lakh ha in 2009, maize grew from 11,000 hectares in 1961 to 12.9 lakh ha in 2009. lakh ha from 1961 to 2001. Over the past 50 years, the planting area has seen a slight decrease from 102.3 lakh ha (1961) to 101.7 lakh ha (2009) while the planting area increased by about 17% from 105.9 lakh ha to 123.7 lakh ha at the same time.³ Horticulture covers 18.9 lakh ha with a production of 136.6 lakh ha. Fruits (mango, banana, papaya, grapes, sap, etc.) account for 41.9%; vegetables (potatoes, tomatoes, onions, brinjal, etc.) 45.3%; spices.

2. CROPPING PATTERN IN KARNATAKA

Karnataka is the eighth largest region in India with an area of 190.5 lakh (192 sq km) of land covering 6.3 percent of the country's land area. The state is divided into 30 provinces and 176 taluks are spread over 27,397 villages. Agriculture is a major function of the state as the sector makes a living of 60% of its employees. Across the region, 98.55 hectares of lakh land is cultivated (netted area) covering 51.73 percent of the total land area in 2016-17. Agriculture in Karnataka is characterized by a large arid region with only 30.1 percent (35.48 lakh) of irrigation area in the Cross Cross-Cropped Area. Therefore, agriculture in the province relies heavily on uncertain rainfall with severe agricultural climate constraints and resources. Agriculture in Karnataka is characterized by a diverse planting pattern that is heavily dependent on southwestern waters. A slight decline is reflected in the GSDP construction of the

agricultural sector and combined activities from 11.67 percent in 2016-18 to 10.11 percent in 2016-19. Apart from reducing their share of the country's total GSDP production) agriculture plays a key role in the overall economic growth of Karnataka as this sector is a major source of livelihood for the rural population in the province. Agriculture in Karnataka is characterized by a diverse planting pattern and a strong reliance on monsoon in the southwest. Agriculture contributed 10.11 percent (current figures) to the state GSDP for 2016-19 (AE). The Karnataka region falls into Zone X (South Hilly region) and Zone XII (West Coast Plains region and Ghats) according to the Agroclimatic Regional Planning Commission. The Kingdom is divided into 10 Agro climates based on distribution and rainfall, soil level, sea level, and the basis of large vegetation. Due to this varied agricultural climate, almost all types of grain, pulses, oilseeds, and commercial crops are grown in different parts of the State. Farmers in Karnataka innovate and take the lead in categorizing market trends (Economic Survey-2016-19).

3. PROFILE OF STUDY AREA

Kolar is a regional headquarters. Located just south of Karnataka, it is a very eastern region. The district is surrounded by Bangalore Rural district in the west, Chikballapur district in the north, Chittoor district in Andhra Pradesh in the east, and Krishnagiri district in Tamil Nadu in the south. On September 10, 2007, it was split into two to form the new district of Chikballapur. As a result of the discovery of Kolar Gold Fields, the region became known as the "Land of Gold" of India. People point out that gold is still abundant in the Kolar Gold Fields mines and is also present in Mulbagal, Kolar, Bangarapet, Malur, Srinivasapura taluks of Kolar District. However, it must be verified by the government and government officials.

(1) Cropping pattern in Kolar districts

According to the 2011 Census, there are 25.50 percent farmers and 28.03 percent agricultural workers. Paddy, Ragi, and maize are the most widely grown crops in the region. Groundnut, sunflower, Niger seeds, rape & mustard are some of the oilseed crops grown in the region. Among commercial crops, only sugarcane may be mentioned. Adequate and abundant space is placed under planting and horticultural plants. The most widely grown vegetables are potatoes, cabbage, bananas, onions, tomatoes, cashew nut, grapes, etc. Other spices and seasonings produced locally are dried peppers and coriander. The yield of paddy under irrigated per hectare is 3,237 kg. It is 2,055 kg. per hectare under non-irrigated conditions. Maize per hectare is 2,689 kg. under irrigated conditions at 2,418 kg. per hectare under the condition of non-irrigation.

(2) Irrigation

Low rainfall and uncertain well-distributed rainfall highlight the importance of irrigation. There are no endless rivers or large reservoirs. Therefore, irrigation with tanks and wells is a regional feature. In the case of exploitation of groundwater resources, the Kolar region has gained a prominent position among the State districts. Tanks and wells are the main sources of irrigation in the region. The

region has provided significant capacity for tank construction due to its river system. These beneficial features have already been put to good use as well because it is clear that in the Kolar region the tank system is very well established. Most of the tanks found in the series flow through one. A large number of tanks are built into the integrated system of streams and its many servers. Many wells in the region are equipped with electric pump sets. In addition, there are handcrafted and yatha and piccota. Since no large or endless river flows through the region, there is no size for any major irrigation project.

4. SIGNIFICANCE OF THE STUDY

1. This study helps to former to decide on their crops.
2. This study helps Marketers to set the appropriate strategy for their business.
3. This study helps the government to chalk out the plans and policy towards the various Agricultural schemes towards crops in the study area.
4. This study will be input for future Academicians, Scholars, and Researchers.
5. This study helps various stakeholders of the crops who are directly or indirectly getting the benefits from crops.

5. OBJECTIVES OF THE STUDY

1. To study the cropping pattern in Karnataka and factors affecting to it
2. To study the cropping and Irrigation system in Kolar district
3. To analyze the irrigated and un-irrigated agriculture crops production in Kolar district.

6. RESEARCH METHODOLOGY

A research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevant research purposes with the economy in procedure. The research design is analytical and descriptive. The study aims to study the cropping pattern in Karnataka and factors affecting it in addition to this study the coping and Irrigation system in Kolar districts. And also analyze the irrigated and un-irrigated agriculture crops production in Kolar districts. To accomplish this objective the applied methodology shows in the below table.

S.No	Particulars	Research Design
1.	Research Design	Analytical Research Design
2.	Data Collection	Secondary data
3.	Source of Data Collection	2011 census report of Kolar district, Journals, Articles, RBI, Websites and Newspaper etc.
4.	Statistical Tools & Technique	Tabulation & Chart, Simple Percentage Analysis

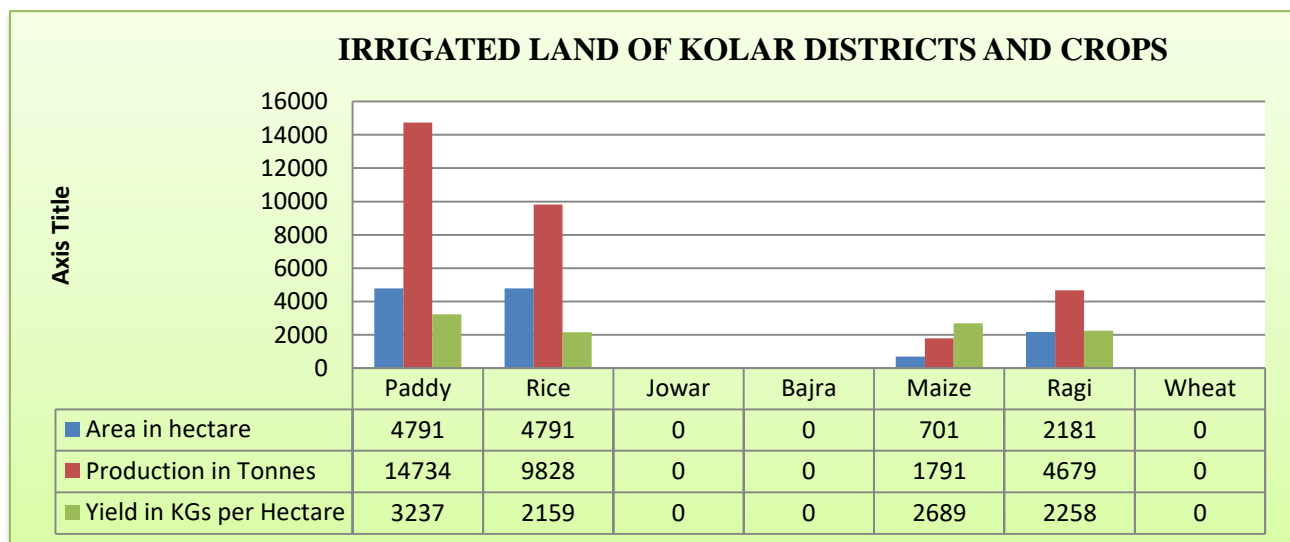
7. DATA ANALYSIS AND INTREPREATION

TABLE NO 1 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALLSEASONS

Principal Crops	IRRIGATED		
	Area in hectare	Production in Tonnes	Yield in KGs per Hectare
Paddy	4791	14734	3237
Rice	4791	9828	2159
Jowar	0	0	0
Bajra	0	0	0
Maize	701	1791	2689
Ragi	2181	4679	2258
Wheat	0	0	0

(Source: 2011 census)

CHART NO 1 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALLSEASONS



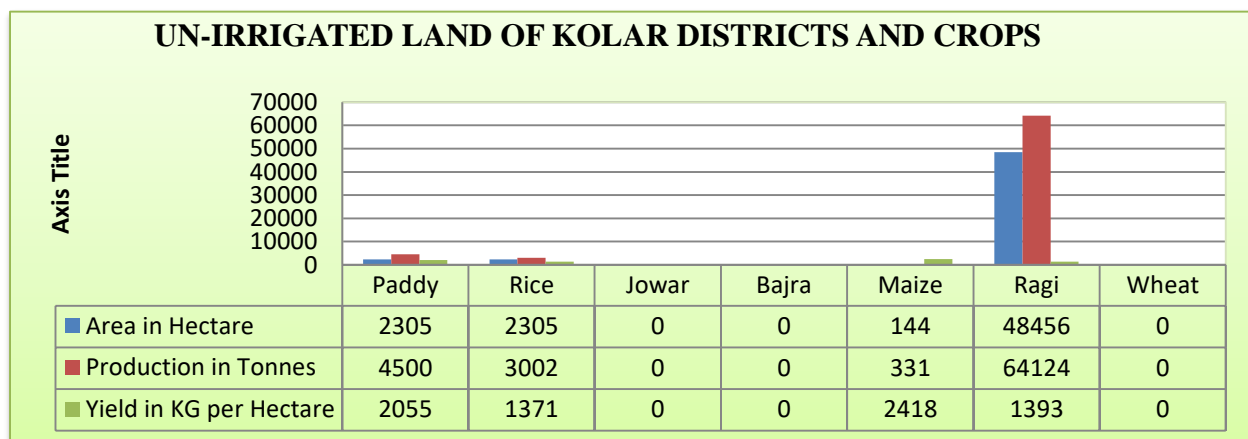
INTERPRETATION

The above Table No 1 shows the area, production and average yield of principal crops for 2009-10 under all seasons of Irrigated land Paddy crop cover the 4791 hectares with Production of 14734 Tonnes. Rice crops are covered the 4791 hectares of area with the production of 9828 tonnes with yield KG's per hector is 2159. Maize crops are covered the 701 hectares of area with the production of 1791 tonnes with yield KG's per hector is 2689. Ragi crops are covered the 2181 hectares of area with the production of 4679 tonnes with yield KG's per hector is 2258. The majority of formers of irrigated lands are shown interest in producing the Paddy crops

TABLE NO 2 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALL SEASONS (UN-IRRIGATED)

Principal Crops	UN-IRRIGATED		
	Area in Hectare	Production in Tonnes	Yield in KG per Hectare
Paddy	2305	4500	2055
Rice	2305	3002	1371
Jowar	0	0	0
Bajra	0	0	0
Maize	144	331	2418
Ragi	48456	64124	1393
Wheat	0	0	0

CHART NO 2 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALL SEASONS (UN-IRRIGATED)



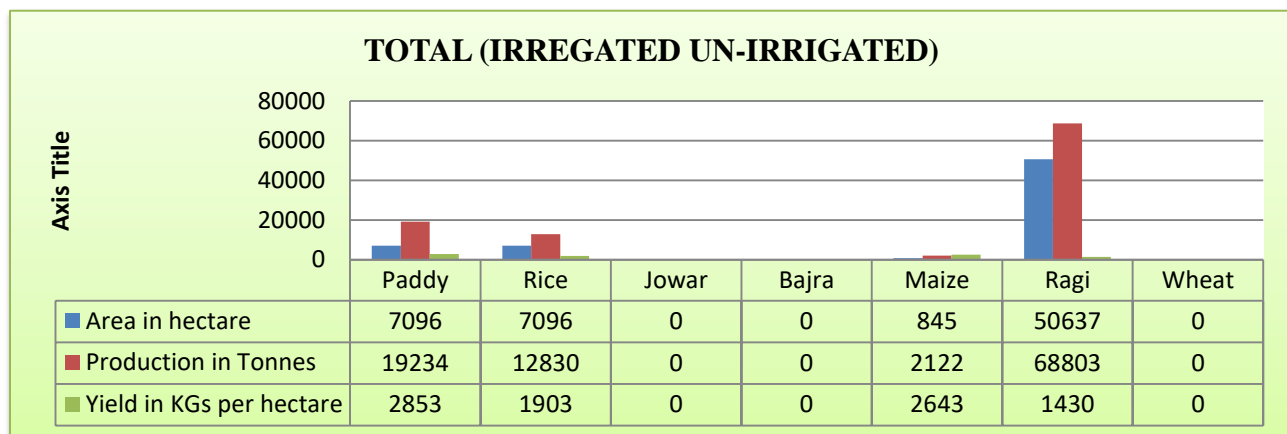
INTERPRETATION

The above chart No 2 shows the area, production, and average yield of principal crops for 2009-10 under all seasons of un-Irrigated land. Paddy crop covers the 2305 hector with a Production of 4500 Tonnes. Rice crops are covered the 2305 hectares of the area with the production of 3002 tonnes with yield KG's per hector is 1371. Maize crops are covered the 144 hectares of the area with the production of 331 tonnes with yield KG's per hector is 2418. Ragi crops are covered the 48456 hectares of the area with the production of 64124 tonnes with yield KG's per hector is 1391. The majority of formers of un-irrigated lands are shows interest in producing the Raagi crops.

TABLE NO 3 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALL SEASONS (TOTAL IRRIGATED AND UN-IRRIGATED)

Principal Crops	TOTAL (IRRIGATED UN-IRRIGATED)		
	Area in hectare	Production in Tonnes	Yield in KGs per hectare
Paddy	7096	19234	2853
Rice	7096	12830	1903
Jowar	0	0	0
Bajra	0	0	0
Maize	845	2122	2643
Ragi	50637	68803	1430
Wheat	0	0	0
Total small Millets	6 0	4 4	7 7 2
Total cereals and Millets	58638	83799	1504
Total Pulses	14120	8588	640

CHART NO 3 AREA, PRODUCTION AND AVERAGE YIELD OF PRINCIPAL CROPS FOR 2009-10 UNDER ALL SEASONS (TOTAL IRRIGATED AND UN-IRRIGATED)



INTERPRETATION

The above chart No 3 shows the area, production, and average yield of principal crops for 2009-10 under all seasons of total Irrigated And Un-Irrigated land. Paddy crop covers the 7096 hectares with Production of 19234 Tonnes. Rice crops are covered the 7096 hectares of the area with the production of 12830 tonnes with yield KG's per hector is 1903. Maize crops are covered the 845 hectares of the area with the production of 2122 tonnes with yield KG's per hector is 2643. Ragi crops are covered the 50637 hectares of the area with the production of 68803 tonnes with yield KG's per hector is 1430. The majority of formers of un-irrigated lands are shows interest in producing the Raagi crops.

8. CONCLUSION

The 2011 census of the regional planting pattern shows that the agricultural sector of the Karnataka region is operating on traditional lines and traditional planting methods. Depending on the precarious rainfall, climate problems and lack of irrigation facilities are the main causes of the slow pace of modern development and trade in the state agricultural sector. Lack of better storage and marketing facilities, lack of institutional debt, lack of affordable prices are other important reason for the slow pace of trade in the agricultural sector in government. It is found that under all ages the world is watered and untouched. The paddy crop covers 7096 hectares with 19234 tons of production. Rice crops are covered on an area of 7096 hectares with a production of 12830 tons per KG's harvest per 1903 hectare. 50637 hectares of land with a production of 68803 tons with a yield of KGs per 1430 hectares. Most of the uncultivated fields indicate interest in Raagi crop production. In this regard, the government and policymakers must focus on the development of agricultural infrastructures such as irrigation, storage, marketing facilities, adequate institutional debt, and the guarantee of better prices for farm products. The government's sincere efforts in solving the problems facing the farming community will enable them to achieve greater success, productivity, and the development of the agricultural sector into a profitable business proposal instead of a livelihood.

9. REFERENCES

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