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CROPPING PATTERN TRENDS IN KARNATAKA

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ABSTRACT

Agriculture is the dominant occupation of the countries like India where half of population is depending on agricultural sector for its livelihood. In spite its contribution to the employment its share to the national income is about 12 percent. The any changes in agricultural sector will heavily influence on the national economy. The changes cropping pattern is one such issue changes in which may influence the food security as well expansion of the economy as a whole. In this context an attempt has been made in this paper to analyze the changes cropping pattern in Karnataka since 1960-60 to 2018-19.

I. INTRODUCTION

Karnataka is eighth largest state in India by covering 190.5 lakh hectares of (192 sq km) geographical area of the country which accounts 6.3 per cent of the geographical area of the country. The state is delineated into 30 districts and 176 taluks spread over 27,397 villages. Agriculture is the major occupation of the state as this this sector livelihood to 60 percent of its workforce. Out of the total geographical area of the state 98.55 lakh hectares of land is cultivated (net sown area) which accounts 51.73 percent of the total geographical area of the state in 2016-17. Agriculture in Karnataka is characterized by massive drought prone region with only 30.1 per cent (35.48 lakh hectares) of the area under irrigation in Gross Cross Cropped Area. Therefore, agriculture in state heavily depends upon uncertain rainfall with severe agro-climatic and resource constraints. Agriculture in Karnataka is characterized by diversified cropping pattern with heavy dependency on southwest monsoon.

A marginal decrease is evident in the composition of GSDP of agriculture & allied activities sector from 11.67 percent in 2017-18 to 10.11 percent in 2018-19. Despite a reduction in its share in the gross state domestic production (GSDP) agriculture plays a vital role in the overall growth of Karnataka's economy as this sector is

major source of livelihood for the rural population in the state. Agriculture in Karnataka is characterized by diversified cropping pattern and heavy dependency on southwest monsoon. Agriculture contributed 10.11 per cent (at current prices) to the state's GSDP in 2018-19(AE).

Karnataka State falls in Zone X (Southern Plateau and Hilly region) and Zone XII (West Coast Plains and Ghats region) as per the Agroclimatic Regional Planning of Planning Commission. The State is divided into 10 Agro climatic zones on the basis of distribution and quantum of rain fall, soil quality, height from the sea and on the basis of major crops. On account of this varied agro-climatic features almost all cereals, pulses, oilseeds and commercial crops are cultivated in different parts of the State. Farmers in Karnataka are very innovative and take lead in diversification as per the market trends (Economic Survey-2018-19). In this context, it is essential to understand trends in the changing cropping patterns in Karnataka agriculture. Therefore, this section of the thesis aiming to analyse changing trends in cropping pattern of states agriculture sector.

The trend analysis of cropping pattern of the state is carried out for over fifty-eight years decades from 1960-61 to 2018-19 at the state level. The analysis was split into three phases: 1951 - 1961 (the pre-green revolution period), 1971-1991 (the post-green revolution period) and 1991 - 2018 (the post-reforms period). Data for the analysis was collected from various Economic Survey published by the Directorate of Economics and Statistics, Government of Karnataka, and the publications Department of Agriculture, Karnataka State.

II.OBJECTIVES AND METHODS

The present paper aims to analyse the changing cropping patterns in the Karnataka state since 1960-61 to 2018-19 in two phases pre-green revolution phase and post-green revolution period. The paper is on the basis of secondary data collected from Economic Survey of Department of Economics and Statistics Government of Karnataka and Department of Agriculture. The available data analysed in table form and presented in simple pie diagram.

III.DATA ANALYSIS

The data on cropping pattern of the Karnataka analysed in two phases i.e., pre-green revolution period and post-green revolution period.

1.Pre-Green Revolution Phase (1960-61)

In pre-green-revolution food grain crops dominate the cropping pattern accounting for over three fourth (77.08 percent) of the gross cropped area (GCA) in Karnataka in 1960-61. Among food grains, cereals occupy prominent place in the cropping pattern. Jowar occupied the predominant position (29.04 per cent) in the cropping pattern followed by rice (10.05 per cent), ragi (9.74 per cent), bajra (4.89 per cent) wheat (3.19 per cent) and share of area under minor millet in GCA was 4.34 per cent.

Table:1 Cropping Pattern in Karnataka

(Unit: Area in lakh hectare)

Sl. No	Crops	1960-61	1970-71	1980-81	1990-91	2000-01	2011-11	2018-19

1	Cereals	62.75 (61.38)	59.71 (59.13)	55.73 (58.23)	54.16 (51.57)	57.57 (53.61)	54.45 (49.69)	42.63 (44.29)
2	Pulses	13.06 (12.77)	14.44 (14.30)	15.31 (15.99)	16.21 (15.43)	20.47 (19.06)	27.91 (25.47)	28.92 (30.24)
	Total Food Grains	78.80 (77.08)	74.15 (73.43)	71.04 (74.23)	70.37 (67.0)	78.04 (72.67)	82.36 (75.17)	71.55 (74.81)
4	Total Oil Seeds	12.47 (12.99)	13.98 (13.84)	12.51 (13.07)	25.51 (24.29)	18.94 (17.63)	16.24 (17.56)	12.44 (13.00)
5	Cotton	9.8 (9.58)	11.42 (11.31)	10.12 (10.57)	5.96 (5.67)	5.52 (5.51)	5.48 (5.00)	4.78 (4.99)
6	Sugarcane	0.72 (0.07)	1.04 (1.03)	1.54 (1.60)	2.72 (2.58)	4.14 (3.85)	4.23 (3.86)	5.93 (6.20)
7	Tobacco	0.39 (0.38)	0.38 (0.37)	0.52 (0.54)	0.46 (0.43)	0.71 (0.66)	1.25 (1.14)	0.93 (0.97)
	Total Commercial Crops	23.38 (22.87)	26.82 (26.56)	24.69 (25.79)	34.65 (39.99)	28.7 (26.72)	27.2 (24.82)	24.08 (25.18)
	Grand Total	102.22 (100)	100.97 (100)	95.7 (100)	105.02 (100)	107.38 (100)	109.56 (100)	95.63 (100)

Source:

FRE of DE&S 2015-16 Advance Estimates of Agri. Dept. (1960-61 to 2010-11)

Economic Survey 2013-14 (2011-12,2012-13 & 2013-14) ()

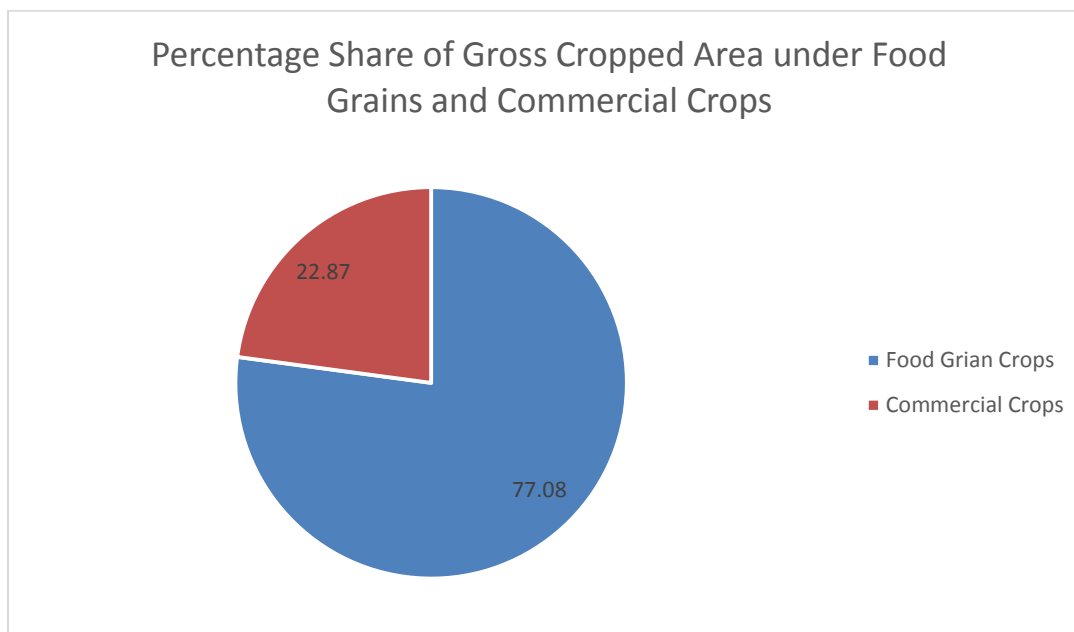
Economic Survey 2015-16 (2014-15 & 2015-16)

Economic Survey 2018-19 (2016-17,2017-18 & 2018-19)

After cereals pulses were in the second position in the cropping pattern of this period by covering 12.77 percent of the GCA. The major pulses cropped during this period were black gram (8.33 percent), tur (2.89 percent) and Bengal gram (1.54 percent) respectively.

The oilseeds were in the next place in cropping pattern of the state after pulses with the share of 13 percent of the GCA. Among oilseeds groundnut was dominant crop followed by (8.95 percent), safflower (1.40). The share of area under cultivation of sesamum, linseed castor, niger, mustard to the GCA was negligible.

The major annual crops of state during 1960-61 were cotton, sugarcane and tobacco. Among these annual crops cotton was the dominant crop with 9.62 percent in GCA followed by sugarcane (0.70 percent) and tobacco (0.38 percent).



In the analysis all the crop groups such as cereals, pulses, oilseeds and annual crops are broadly categorized into two groups i.e. food grains and commercial crops to understand the direction of the agricultural sector of Karnataka. Therefore, the area covered by all food grains including cereals and pulses accounts 77.08 percent in GCA and dominating the cropping pattern of the pre-green revolution period. The oilseeds and annual crops such as, cotton, sugarcane and tobacco were categorised as commercial crops. The area share of the commercial crops was 22.87 percent in GCA. This trend in cropping patterns of the state reveals that Karnataka agricultural sector was not still commercialized.

2. Post-Green Revolution Phase (1970-71 to 2018-19)

The green revolution introduced by the Government of India in mid sixties in the country brought many positive impacts on Indian agriculture. The green revolution helped India move from a state of importing grains to a state of self-sufficiency (Brainerd and Menon, 2014). Earlier, it was the ship-to-mouth system, i.e., India depended on imported food items (Ramachandran and Kalaivani, 2018). There are undoubtedly positive effects on the overall food security in India. There are undoubtedly positive effects on the overall food security in India. However, after a certain period, some unintended but adverse effects of the green revolution were noticed. The green revolution was also influenced the agricultural sector of the Karnataka.

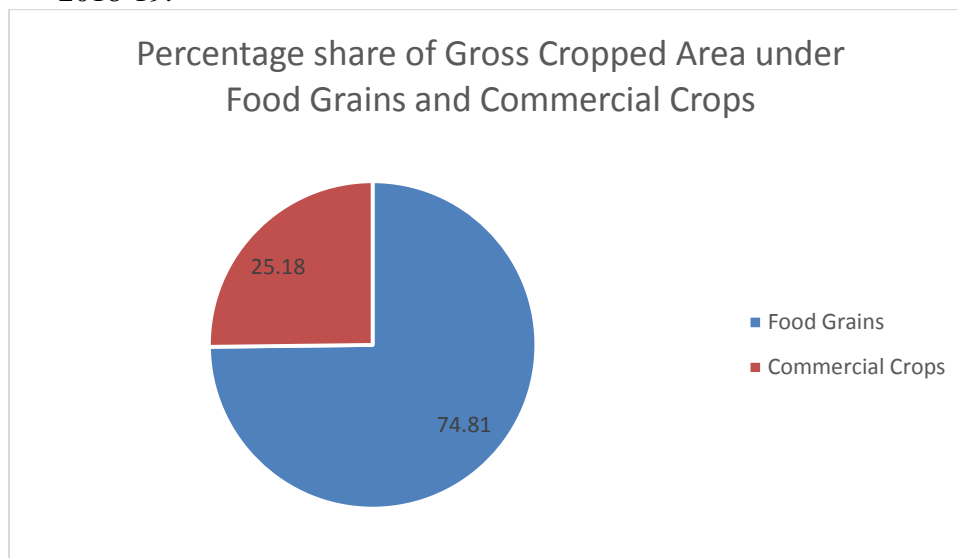
The green revolution had its significant impacts on cropping pattern of the state. The area under food grains increased to 74.81 percent in 2018-19 as against 73.43 percent in 1970-71. It is noteworthy that in spite of declining trend in area covered by food grains they were dominant crops during this period. Among cereals area under jawar was declined during post-green revolution period from 22.22 percent of 1960-61 to 8.95 percent 2018.19. The area share of maize has fluctuated shown an increasing trend from 0.62 percent to 13.08 percent between 2018-19. However, per cent of area under certain food crops like rice, wheat, bajra, ragi has persistently shrink during the same period.

The share of area under pulses to total cropped area in Karnataka stood at 30.24 percent in 2018-19 as against 14.30 percent in 1970-71. After the green revolution bengal gram was the increased and become major crop among pulses. The percentage of area share of tur, green gram, cowpea, has shown an increasing trend in the GCA in this period. But the area under horse gram, avare, black gram, cowpea and other pulses fluctuated during this period. The overall cropping pattern of pulses was volatile in post-green revolution period.

The green revolution heavily influenced on area under oilseeds. As a consequence of the Technology Mission on Oilseeds introduced by the Government of India in 1986 the area under oil seeds increased from 13.84 percent of 1960-61 24.29 percent in 1990-91. But shown a declining trend in after post reforms period and reached to 13.0 percent by 2018-19.

The area under cotton continuously declined in post green revolution period and it was 5.67 percent in 2018-19 as against 11.37 percent of 1960-61. But the area under Sugar cane increased from 1.03 percent of 1960-61 to 6.20 percent in 2018-19 and the changes in area under tobacco was insignificant during this period.

The cropping pattern of the commercial crops in Karnataka state during post green revolution period fluctuated but there was a declining trend in area under commercial crops after the 1990-91 in post reforms period as the area under commercial crops was 26.56 percent in 1960-61 came down to 24.18 percent in 2018-19.



The cropping pattern in the post green revolution period in the Karnataka showing slow commercialization of the agricultural sector in the state. The area covered by all food grains including cereals and pulses accounts 74.81 percent in GCA in 2018-19 and even in post-green phase food grains are dominating the cropping pattern of the state. The area share of the commercial crops was 25.81 percent in GCA. This trend in cropping patterns of the state implies that the slow changes cropping pattern of the state is towards commercial crops and potential to commercialize the state's agricultural sector. The reason behind such slow commercialization of agriculture in the state is heavy dependency upon uncertain rainfall with severe agro-climatic and resource constraints and existence of massive drought prone region with only 30.1

per cent (35.48 lakh hectares) of the area under irrigation in Gross Cross Cropped Area.

IV. IMPLICATIONS OF THE STUDY

- a. The declining trend in the Gross Cropped Area 102.22 lakh hectares to 95.63 hectares implies that shifting in land use pattern towards non-agricultural purposes.
- b. The ample opportunities for the expansion of agricultural sector of the state by expanding irrigation facilities.
- b. Agriculture is source of livelihood for the farming community instead of commercial proposition.
- d. The cropping pattern of the state is dominated by the food grains with area share of 74.81 percent of the Gross Cropped Area.

V. CONCLUSION

The analysis seven decades of the cropping pattern of the state reveals that agricultural sector of the Karnataka state is operating on traditional lines with the old methods of cultivation. The dependency on uncertain rainfall, climatic constrains and lack of irrigational facilities are the major reasons behind slow modernization and commercialization of the state's agricultural sector. Absence of better storage and marketing facilities, inadequate institutional credit, absence of remunerative prices is some other important reason for slow commercialization of the agricultural sector in the state. In this context the government and policy makers must concentrate on development of agriculture infrastructure such as irrigation, storage, marketing facilities, sufficient institutional credit with assurance of better prices for farm products. The honest efforts of the governments towards solving problems face by the farming community will definitely help them to achieve more efficiency, production, modernization of the agricultural sector making it as profitable business proposition instead of subsistence occupation.

References:

1. Brainerd, E., and Menon, N. (2014). Seasonal effects of water quality: the hidden costs of the Green Revolution to infant and child health in India. *J. Dev. Econo.* 107, 49–64. doi: 10.1016/j.jdeveco.2013.11.004.
2. Ramachandran, P., and Kalaivani, K. (2018). Nutrition transition in India: Challenges in achieving global targets. *Proc. Natl. Acad. Sci. U.S.A.* 84, 821–833. doi: 10.16943/ptinsa/2018/49450. [CrossRef Full Text](#) | [Google Scholar](#)