

Vol 6 Issue 11 August 2017

ISSN No : 2249-894X

---

*Monthly Multidisciplinary  
Research Journal*

*Review Of  
Research Journal*

Chief Editors

---

**Ashok Yakkaldevi**  
A R Burla College, India

**Ecaterina Patrascu**  
Spiru Haret University, Bucharest

**Kamani Perera**  
Regional Centre For Strategic Studies,  
Sri Lanka

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

### Regional Editor

Dr. T. Manichander

### Advisory Board

Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Delia Serbescu Spiru Haret University, Bucharest, Romania	Mabel Miao Center for China and Globalization, China
Ecaterina Patrascu Spiru Haret University, Bucharest	Xiaohua Yang University of San Francisco, San Francisco	Ruth Wolf University Walla, Israel
Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Karina Xavier Massachusetts Institute of Technology (MIT), USA	Jie Hao University of Sydney, Australia
Anna Maria Constantinovici AL. I. Cuza University, Romania	May Hongmei Gao Kennesaw State University, USA	Pei-Shan Kao Andrea University of Essex, United Kingdom
Romona Mihaila Spiru Haret University, Romania	Marc Fetscherin Rollins College, USA	Loredana Bosca Spiru Haret University, Romania
	Liu Chen Beijing Foreign Studies University, China	Ilie Pinteau Spiru Haret University, Romania
Mahdi Moharrampour Islamic Azad University buinzahra Branch, Qazvin, Iran	Nimita Khanna Director, Isara Institute of Management, New Delhi	Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai
Titus Pop PhD, Partium Christian University, Oradea, Romania	Salve R. N. Department of Sociology, Shivaji University, Kolhapur	Sonal Singh Vikram University, Ujjain
J. K. VIJAYAKUMAR King Abdullah University of Science & Technology, Saudi Arabia.	P. Malyadri Government Degree College, Tandur, A.P.	Jayashree Patil-Dake MBA Department of Badruka College Commerce and Arts Post Graduate Centre (BCCAPGC), Kachiguda, Hyderabad
George - Calin SERITAN Postdoctoral Researcher Faculty of Philosophy and Socio-Political Sciences Al. I. Cuza University, Iasi	S. D. Sindkhedkar PSGVP Mandal's Arts, Science and Commerce College, Shahada [ M.S. ]	Maj. Dr. S. Bakhtiar Choudhary Director, Hyderabad AP India.
REZA KAFIPOUR Shiraz University of Medical Sciences Shiraz, Iran	Anurag Misra DBS College, Kanpur	AR. SARAVANAKUMAR LAGAPPA UNIVERSITY, KARAIKUDI, TN
Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur	C. D. Balaji Panimalar Engineering College, Chennai	V. MAHALAKSHMI Dean, Panimalar Engineering College
Awadhesh Kumar Shirotriya	Bhavana vivek patole PhD, Elphinstone college mumbai-32	S. KANNAN Ph.D , Annamalai University
	Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust), Meerut (U.P.)	Kanwar Dinesh Singh Dept. English, Government Postgraduate College , solan

More.....



## A STUDY ON CROP DIVERSIFICATION OF BELTHANGADY TALUK IN DAKSHINA KANNADA DISTRICT



**Sathisha K.**

Assistant Professor , Department of Economics, PG Centre  
SDM College (autonomous) Ujire.

### ABSTRACT :

**D**akshina Kannada also known as South Canara is a coastal district in the state of Karnataka. The district is divided into five talukas-Mangalore, Bantwal, Puttur, Sullia and Belthangady. Dakshina Kannada is primarily an agricultural district of Karnataka state. More or less, 60 per cent of population of the district depends on agriculture for their livelihood. Paddy is the chief crop among food crops of the district. Horticulture crops grown in this district are helpful to balance economic condition of the agriculturist. Unlike other districts, crops like coconut, arecanut, pine-apple, banana, rubber, mango, vegetables etc are the common crops cultivated by many farmers in this district. The area under horticulture crops has been gradually increasing. Agriculture sector in Dakshina Kannada district has witnessed several changes such as changes in land use pattern, changes in agricultural land holdings, changes in agricultural workforce, crop diversification etc. Diversification in agriculture refers to the adoption of the farming system involving shift in cropping pattern from traditionally grown less remunerative crops to more remunerative crops like oil seeds, pulses, fodder crops, horticulture, medicinal and aromatic plants, floriculture, etc, and including land-based activities like livestock and fishery enterprises.

**KEYWORDS :** Dakshina Kannada , livelihood , horticulture , medicinal and aromatic plants.

### INTRODUCTION

The cultivation of paddy is in deep crisis today. In Dakshina Kannada the area under paddy in 2000-2001 was 66203 hectares which came down to 54633 hectares by 2010-11. Even the farmers who used to harvest three crops earlier now harvest only one crop. The youths are not keen on taking up agriculture. Many of them have migrated to urban areas in search of jobs. Due to the introduction of commercial farming, attractive income from the plantation enabled the farmers to convert their paddy fields into plantations of areca, rubber, coconut etc. The fast pace of urbanisation seems to be a curse for traditional farming in Dakshina Kannada district. This has made the paddy crop unsustainable. Belthangady, one of the major paddy cultivating area in Dakshina Kannada districts of Karnataka has an influence on the total paddy output. The utilisation of land for paddy cultivation has been declining. In view of the above said problem there is an immediate need to analyse the change in crop pattern. Thus a study of changing crop pattern becomes essential in this area.

### OBJECTIVES OF THE STUDY

- (1)-To examine diversification of crops.
- (2)-To examine the reason for changes in crop pattern.

## SAMPLING DESIGN

This study is based on empirical data. The study used case study method, by selecting Belthangady taluk of Dakshina Kannada District. Six villages have chosen from the taluk. Ujire, Aladangadi, Kudyadi, Marodi, Koyyuru and Belalu villages selected from Belthangady taluk. The researcher randomly selected 150 farmers for study. Considering heterogeneous character among the farmers researcher made stratification on the basis of size of land holdings. Again 25 respondents were selected from each village. From the 150 sample size of the universe, study would like to select 40 per cent from less than 2.5 acres of farmer, 30 per cent 2.5-5.00 acres, and 20 per cent from 5-10 acres and 10 per cent from large more than 10 acres. The field survey related to the research problem was conducted during 2014-2015. In view of the multiple objectives, the data was collected from more than one source. The study was based on primary data. Regarding the primary data, an interview schedule was designed to collect data related to the sample respondent's landholdings, changes in cropping pattern, reasons for change in crop pattern, land-utilisation pattern, and other aspects related to the overall objectives of the study. Dakshina Kannada district of Karnataka state was selected as the study area to examine and analyse the research problem. Belthangady taluk has witnessed major changes in crop pattern among the five taluks and is also the least urbanised amongst the other taluks of Dakshina Kannada.

## CLASSIFICATION OF LANDHOLDINGS IN THE STUDY AREA

The present study collected primary data from a sample of 150 landholders in the study area. On the basis of the size of the landholdings of the respondents, the researcher has classified them into four categories as marginal, small, medium and large landholders. Landholdings less than 2.5 acres, between 2.5 acres to 5 acres, landholdings 5 to 10 acres and landholdings more than 10 acres

Table-1: Category-Wise Landholdings of Sample Farmer of Belthangady in 2014

Sl. No.	Name of the Village	Category of Landholdings				Total
		less than 2.5 acres	2.5-5 acres	5-10 acres	More than 10 acres	
1	Marodi	08	10	03	04	25
2	Aladangadi	10	07	06	02	25
3	Belalu	10	06	06	03	25
4	Ujire	12	06	05	02	25
5	Kudyadi	12	06	05	02	25
6	Koyyuru	08	10	05	02	25
	Total	60 (40)	45 (30)	30 (20)	15 (10)	150 (100)

Source: Field Survey (values inside the brackets indicate percentage)

Table-1 represents the number of sample farmers in Belthangady taluk. There were 150 landholders in the six selected villages. The researcher collected primary data from 25 landholders from each village. Among this, 40 per cent were less than 2.5 acres landholders, 30 per cent were 2.5-5 acres land holders, 20 per cent were 5-10 acres landholders and 10 per cent were more than 10 acres landholders. The table also shows that the numbers farmer falls under less than 2.5 acres are more in Ujire and Kudyadi villages. The numbers of landholder falls under 2.5 to 5 acres are more in Koyyuru and Marodi villages. Large number of farmers of Marodi village falls under more 10 acres of land.

## CROP PATTERN OF THE STUDY AREA

Crop pattern plays a vital role in the agricultural development of a region. Crop pattern is the proportion of area under different crops at a particular period of time. A change in cropping pattern means a change in the proportion of area under different crops. Table-2, Table-3, Table-4 and Table-5 examine the crop pattern of

Belthangady in 2004 and 2014. It helps to understand the major changes in crop pattern in this taluk.

**Table-2: Cropping Pattern of Sample Farmers in Belthangady in 2004  
(Area in Acres)**

Name of Crop	Villages of Sample Farmers						Total
	Marodi	Aladangadi	Belalu	Ujire	Kudyadi	Koyyuru	
Paddy	63.75 (80.24)	66.75 (78.48)	77.15 (78.68)	39.8 (65.73)	35.30 (50.50)	51.15 (72.09)	333.90 (71.97)
Areca nut	5.50 (6.92)	10.4 (12.43)	3.30 (3.37)	11.9 (19.65)	21.35 (30.54)	12.15 (17.12)	64.60 (13.92)
Coconut	0.50 (0.63)	5.10 (6.00)	11.20 (11.42)	4.30 (7.10)	7.25 (10.37)	4.15 (5.85)	32.50 (7.01)
Rubber	-	-	4.00 (4.08)	-	-	0.50 (0.70)	4.50 (0.97)
Cashew	6.60 (8.30)	1.30 (1.53)	0.65 (0.66)	2.20 (3.63)	4.00 (5.72)	1.50 (2.11)	16.25 (3.50)
Vegetables	2.15 (2.71)	0.75 (0.88)	0.8 (0.82)	1.5 (2.48)	1.00 (1.43)	0.60 (0.85)	6.80 (1.47)
Banana	0.95 (1.20)	0.75 (0.88)	0.95 (0.97)	0.85 (1.40)	1.00 (1.43)	0.9 (1.27)	5.40 (1.16)
Total	79.45 (100)	85.05 (100)	98.05 (100)	60.55 (100)	69.9 (1000)	70.95 (100)	463.95 (100)

Source: Field Survey (values inside the brackets indicate percentage)

Table-2 gives information on the crop pattern of the sample farmers in Belthangady in 2004. The table indicates that paddy is the major crop in Belthangady based on area when compared to other crops. Out of the total cropped area of 463.95 acres in 2004, food crop occupied an area of 333.90 acres (71.97 per cent) and non-food crop occupied 130.05 acres (28.03 per cent). The main non-food crops grown in the study area during 2004 were Areca nut, Coconut, Rubber, Cashew, Vegetables, and Banana. From the total cropped area, percentage area for rubber was smaller than the other crops. Among the villages, Marodi has the largest per cent share of area under paddy cultivation to total cropped area. The study has also found that Kudyadi village has the highest per cent area under non-food crop cultivation than of food crops among the six villages. It is mainly due to the increase in the area of areca nut cultivation. Coconut cultivation enjoys the highest per cent share in Belalu village's total cropped area. The percentage area of banana cultivation is more in Kudyadi when compared to its total cropped area. Marodi also had shown high per cent share of area under vegetable and cashew crops to its total cropped area. Thus, the analysis leads to the conclusion that the study area has a crop pattern where food crop cultivation dominates non-food crops. The data presented in Table-3 gives us information on the crop pattern in the sample farmers of Belthangady in 2014. The percentage area of paddy to total cropped area is greater than the area of other crops. From the total cropped area, the percentage area of banana is smaller than the other crops. Among the non-food crops, the percentage area is more for areca nut; Kudyadi has less percentage area of paddy among the sample farmers. It is due to the large share of area for non-food crops in Kudyadi village. The study noticed that Aladangadi has the highest per cent of food crop to its total cropped area. Thus, the analysis leads to the conclusion non-food crop predominantly occupies the study area.

Table-3: Cropping Pattern of Sample Villages in Belthangady in 2014 (Area in Acres)

Name of Crop	Villages of Sample Farmer						Total
	Marodi	Aladangadi	Belalu	Ujire	Kudyadi	Koyyuru	
Paddy	41.75 (44.72)	41.90 (49.79)	39.55 (41.96)	14.45 (19.79)	10.30 (15.36)	33.25 (42.25)	181.20 (36.94)
Areca nut	27.00 (28.92)	24.4 (29.00)	35.90 (38.09)	23.90 (32.74)	28.15 (41.98)	17.65 (22.43)	157.00 (32.01)
Coconut	4.85 (5.20)	6.50 (7.72)	1.00 (1.06)	8.8 (12.05)	10.95 (16.33)	5.75 (7.31)	37.85 (7.72)
Rubber	15.75 (16.87)	7.12 (8.46)	17.80 (18.89)	23.85 (32.67)	8.00 (11.93)	21.30 (27.06)	93.82 (19.13)
Cashew	2.00 (2.14)	0.75 (0.89)	-	1.45 (1.99)	3.7 (5.52)	-	7.9 (1.61)
Vegetables	1.5 (1.61)	2.75 (3.27)	-	-	3.50 (5.22)	0.45 (0.57)	8.2 (1.67)
Banana	0.50 (0.54)	0.73 (0.87)	-	0.55 (0.75)	2.45 (3.65)	0.30 (0.38)	4.53 (0.92)
Total	93.35 (100)	84.15 (100)	94.25 (100)	73 (100)	67.05 (100)	78.7 (100)	490.5 (1000)

Source: Field Survey (values inside the brackets indicates percentage)

### REASONS FOR CHANGES IN CROP PATTERN

The crop pattern of Dakshina Kannada district has undergone tremendous change. The researcher has attempted to examine and discuss the reasons for the changes in the crop pattern of Dakshina Kannada district in general and with particular emphasis to Belthangady. Changes in land utilisation pattern is one of the reasons for crop diversification. The researcher noticed a decline of 152.7 acres of land under paddy cultivation of the sample farmers in Belthangady during 2014 (Table-2&3). But 179.25 acres of land under non-food crop cultivation increased in the landholdings of sample farmers of Belthangady during 2014. Existence of large number of marginal landholder is also a cause for changes in crop pattern. It is understood that the number of marginal landholder has been increasing in Dakshina Kannada in general and in the study area in particular. The rise in the number of marginal landholders is mainly due to the breakup of the traditional joint family system, resulting in fragmentation of landholding. Marginal landholders give less preference to cultivate of paddy due to high costs of production. Moreover, getting suitable farm hands in time of farm operation has become a problem for small landholders. Thus marginal landholders prefer commercial crop. Demand of land for non-agricultural purposes is a reason for changes in crop pattern. The activities in commerce, industry, transport etc has risen with the increase in population and changes in socio-economic conditions. This increase has led to the rise in demand for land for construction of houses, shops and establishment of roads etc. Non-availability of agricultural labour force is one of the reasons for changes in crop pattern. Urban centres in the district have been attracting large numbers of migrated agricultural labourers. These labourers easily find jobs in the non-agricultural sectors of the district. Thus, we come to the conclusion that non-availability of agricultural labour is the reason for changes in crop pattern or permanent stop of paddy cultivation in the study area. The study shows that the members of the traditional agriculture families are losing interest in agriculture.

### FINDINGS AND CONCLUSION

First, with regard to the crop pattern of Belthangady during 2004 large acres of the total cropped area of the study regions is occupied by paddy (71.97%). Non-food crops like areca nut, coconut, rubber, cashew, vegetable and banana occupy only 28.03 per cent of the total cropped area. Second, the study revealed that non-food crops (63.06%) occupy large areas of total cropped areas in the study regions of Belthangady during 2014. This showed the predominance of non-food crops in Belthangady during 2014. Third, one of the striking features of the comparative analysis of the crop pattern of Belthangady was the crop diversification towards

non-food crops. Areas under commercial crops like areca and rubber showed an increasing trend in the study areas. The micro level study on 'Crop diversification in Belthangady taluk of Dakshina Kannada district of Karnataka' attempted to bring out changes in the crop pattern in the study region. The study observes that urban areas attract agricultural labourers, farmers, and other members of the family in search of better avenues of life. It also pointed out that some migrate from rural to urban areas for a transitory period. The analysis of the research problem showed that paddy was the major food crop cultivated by the farmers in the study region. However, it is disheartening to note that there is tremendous decline in the cultivation of paddy crop mainly due to shortage of labour. It results in change of crop pattern, method of cultivation, and use of resource and productivity. Due to this change, commercialisation is taking place in agriculture the food crop is going to be affected. Therefore, along with commercialisation of other crops there is an immediate need to promote the cultivation of the principal food crop-paddy, in this district, as a source of livelihood.

## REFERENCES

1. Acharya, S.S. (2003). Crop diversification in Indian Agriculture. *Agricultural Situation in India*, 60(5), 239-250.
2. Andrew, S. (2013). Dynamics of cropping pattern shifts in Kerala: Sources and Determinants, *Agricultural Situation in India*, LXX (6), 15-24
3. Bhalla, G.S., & Singh, G. (2009). Economic liberalisation and Indian agriculture: A state-wise analysis. *Economic and Political Weekly*, 54(52), 34-44
4. Chand, R. (1996). Diversification through high-value crops in Western Himalayan region: Evidence from Himachal Pradesh. *Indian Journal of Agricultural Economics*, 41(4), 652-663.
5. De, U. K.(2003). Changing cropping system in theory and practice: An economic insight into the agrarian West Bengal. *Indian Journal of Agricultural Economics*, 58, (1), 64-83.
6. Joshi, P.K., Gulati, A., BIRTHAL, P., & Tewari, L.(2004). Agricultural diversification in south Asia-patterns determinants and policy. *Economic and Political Weekly*, 39(24), 2457-2467.
7. Kumar, P.& Mital, S. (2006). Agricultural productivity trends in India: Sustainability issues, *Agricultural Economics Research Review*. 19,71-88.
8. Ratheesh, C. (2012). Commercialisation and crop diversification of agriculture in Kerala: An inter district analysis. *Southern Economist*, 51(1),43-46.

# Publish Research Article

## International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Books Review for publication, you will be pleased to know that our journals are

### Associated and Indexed, India

- ★ Directory Of Research Journal Indexing
- ★ International Scientific Journal Consortium Scientific
- ★ OPEN J-GATE

### Associated and Indexed, USA

- DOAJ
- EBSCO
- Crossref DOI
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database

Review Of Research Journal  
258/34 Raviwar Peth Solapur-  
413005, Maharashtra  
Contact-9595359435

E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com