Vol 5 Issue 12 June 2016 ISSN No :2231-5063

International Multidisciplinary Research Journal

Golden Research Thoughts

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RNI MAHMUL/2011/38595 **ISSN No.2231-5063**

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ISSN: 2231-5063 Impact Factor : 3.4052(UIF) Volume - 5 | Issue - 12 | June - 2016

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CROPPING PATTERN AND AGRICULTURAL LAND USE IN MANDYA DISTRICT

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ABSTRACT

The present study is an attempt to analyze the agricultural land use and cropping pattern inMandya district.This study is based on secondary data collected from Mandya district at a glance. Agricultural production influenced by physical, socio-cultural, economic technological and organizational factor.Endeavouris made to study crop combination region in Mandya district for the year 2014-2015. With the help of weaver's (1954) technique calculated crop combination. Physiography, rainfall, soil, temperature and drainage influences on agricultural landuse pattern in this district. Six crops have been considered for crop combination analysis. These Cereals (Paddy, Jowar, Bajra, Maize, Ragi),Oil Seeds (Ground Nut, Sun Flower, Castor, Sesamum, Niger Seed), Commercial Crops (Sugar Cane), Fruit crops (Banana, Mango, Lemon, Pine Apple, Guava, Sapota, Poma-Granate, Papaya), Vegetable Crops (Potato, Tomato, Brinja, Beans, Cluster Beans, Onion, Green Chilles) are major crops by computing pattern and using Weaver's minimum deviation crop combinationin Mandya district has identified two crop combination.

KEYWORDS :cropping pattern, agricultural, land use.

INTRODUCTION:

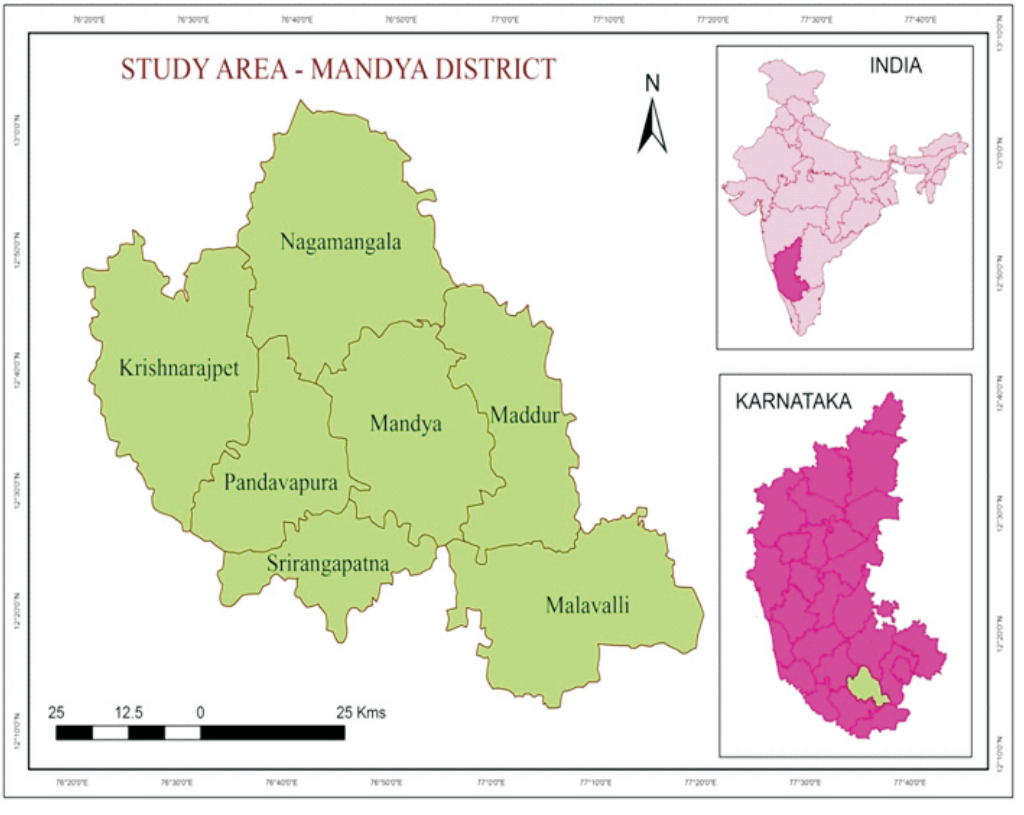
Land-use is an important aspect of studies in agriculture geography. Agricultural land use is the basic structuralunit of natural resources. The history of Agriculture inMandya reveals that famine is of common occurrencefrom ages due to inadequate and ill distributed rains.It forms the basis for all biological, human eco activities.Land is an important input in agricultural sectorbut the yield of agricultural crops mainly depend uponfertility of land for raising different crops, croppingpattern is the

central element of agricultural land use.Cropping means the proportion of area under variouscrops at a point of time.The present study, aims to analyse cropping pattern and agricultural land use with the help of tables.

STUDY AREA

Mandya district lies between 76° 19' and 77° 20' East Longitude and 12° 13' and 13° 04' North Latitude. The district receives an average annual rainfall of 700 mm. The climate of the district comprises of moderate summers (Max 35°C) and moderate winters (Min 20°C). Mandya district comprises of 7 taluks. The total geographical area of the district is 4, 98,244 Ha, out of which 2,53,067 (50.79%) Ha forms the sown area. More than half of the total land area in the district is put to agricultural use.

Total irrigated area is 1,16,901 Ha out of which around 88,000 (75.27%) ha is being irrigated by K.R.Sagar and around 16,000 Ha by Hemavathi reservoir. The rest of the land is irrigated by other sources like tanks, wells and bore wells. With a total population of 1805769, around 5 lakh people are employed in the Agriculture Sector. Mandya District is an agriculturally predominant district in Karnataka state. The farmers in the region adopt improved farm mechanization due to which transformation is taken place in cropping pattern, composition of crops, better grown yield level, ultimately leading to better economic conditions of the people.



OBJECTIVES

• To assess the crop ranking and crop combination regionin Mandya district.

DATA BASE AND METHODOLOGY

The Present study is based on secondary data. To analyze the cropping pattern and agricultural

land use in the study area the simple statistical methods were used to find the result and changes on data abstracted from Mandya district at glance. Simple statistical method has used to computethe least sum of squared deviation and variance and loweststandard deviation and coefficient of variation analysis (weaver)for cropping in the present study.

RESULTS AND DISCUSSION

CROP DISTRIBUTION

Distribution of irrigated land among different crops is shownin table 1. Cereals, pulses,oilseeds, commercial crops, fruits crops and vegetable crops are importantcrops.

Table 1 Mandya District : Crops Grown during 2014-15

S.N	Crops Group	Name of Crops
1	Cereals	Paddy, Jowar, Bajra, Maize, Ragi
2	Pulses	Tur, Horse Gram, Black Gram, Green Gram, Avare Cowpea, Bengal Gram
3	Oil Seeds	Ground Nut, Sun Flower, Castor, Sesamum, Niger Seed
4	Commercial Crops	Sugar Cane
5	Fruits Crops	Banana, Mango, Lemon, Pine Apple, Guava, Sapota, Poma-Granate, Papaya
6	Vegetable Crops	Potato, Tomato, Brinja, Beans, Cluster Beans, Onion, Green Chilles

Source: Mandya District at a Glance - 2014-15

CROP RANKING

It is observed intable 2 that,cerealscrops are the leading cropsas is grown irrigated land. The next important crops arepulsescrops and commercial crops,another vegetable crops,oil seeds crops and fruits crops grown by the study region.The cropsare indicating in percentage ofhectors in annual information cropping data as following.

Table 2 Mandya District : Cropping Pattern during 2014-15

S.N	Crops Group	Area in Hectares	Percent
1	Cereals	132608	57.2
2	Pulses	39237	16.9
3	Oil Seeds	6148	2.7
4	Commercial Crops	37124	16.0
5	Fruits Crops	4633	2.0
6	Vegetable Crops	11906	5.1

Source: Mandya District at a Glance - 2014-15

CROP COMBINATION ANALYSIS

Recently the crop combination, analysis geographical studieshas gained momentum andit is increasingday by day. Combination studies are fruitful in many waysfirstly; they provide an adequate

understanding of individualcrop geography. Secondly,combination is in itselfand integrative reality that demand definition and distributionanalysis and crop combination regions' are essential forthe construction of still more complex stricture of differentagricultural region.According to this method for present study in weaver's cropcombination (Minimum Deviation Method) and calculatinglowest standard deviationand Co-efficient of variation formula was selected for thisstudy and analysis from 2014-15.

Minimum Positive Deviation Weaver's Method:

Crop combination is calculated by applying Weaver's method.In 1954 J.C. Weaver has applied least standard deviationtechnique for computing crop combination of a region.In these district two crop combinations is found having combination of cereals and pulses cropsgroups. Cereals crops group is dominant crop are paddy, jowar, bajra, maize and ragi. Pulses crops group is dominant crop grown aretur, horse gram, black gram, green gram, avare, cowpea and bengal gram.

CONCLUSION

The present study reveals that among ranking of crops, cereals crops occupy the first rank. Weaver's technique has identifiedtwo crop combinations in the study area. The cropping pattern is affectedby the attitude of farmers, crop production and demand for market crop and has led to twocropcombination namely, cereals and pulses crops. Thesecrop combination are found in large scale of landlord farmers.

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