



ECONOMIC DEVELOPMENT THROUGH CROP DIVERSIFICATION IN CHANDRAPUR DISTRICT

Mangala D. Bansod

Home-Economics (HOD)
Shri. Shankarrao Bezalwar
Arts & Com. College, Aheri
bansodmangala2@gmail.com
9423668587

ABSTRACT

Crop diversification gives a wider choice for production of variety of crops in any region in order to increase production related activities. It is just opposite of crop specialization. Crop diversification is generally viewed as a shift from traditionally grown less remunerative crops to more remunerative crops. Crop diversification takes place due to governmental policies and crop selection and attitude of farmers, Market, Infrastructural development and certain other price related support also induce Crop diversification higher profitability and production. The stability induces Crop diversification in case of example. Jawar replacing cotton and Soyabean and rice, Crop diversification grown on large number of crops which are practiced in rainfed land to reduce the risk factor of crop failure either of heavy rainfall or less rain "Raising a variety of crops on arable land is known as Crop diversification." It is the reflection of physical types of soil, soil fertility soil productivity pH value socio-economical and technological organization inputs. Crop diversification indicates multiplication of agricultural crops which involve intense competition for regions scope for crop rotation and effect of double cropping greater competition, higher magnitude of diversification. While lesser the magnitude of diversification greater the trends towards the specialization where emphasis on one or two crops in most of the extensive agricultural part in world agricultural diversification. It is a common feature due to irrigation, use of fertilizers and pesticides, high yielding varieties, mechanization and technology. Besides climate farmer's attitudes and local surroundings are forced farmers for crop diversification. The diversification was studied for ten years (2005 to 2015) in order to find out crop diversification. The diversification Index ranged Chandrapur Districts (in 2005 – 2010) (37.444) While the year 2010 to 2015 (25.77) of crop diversification of agricultural varieties from one version to another regions which responsible factors are more or less variations in resources endowment, Infrastructure level and market accessibility crop diversification of food grain crops.

Keywords: Crop diversification, Index of Crop diversification, Variation in resources endowment, attitude of farmers



INTRODUCTION

Crop diversification is generally viewed as a shift from traditionally grown less remunerative crop to move remunerative crops. The crop diversification takes place due to governmental policies and crop selection and attitude of farmers. Market Infrastructural development and certain other price related supports also induce crop diversification higher Profitability and production. The stability induces crop diversification in case of example Jawar replacing Cotton Soyabean and Rice. Crop diversification grows on large number of crops which are practiced in rainfed land to reduced the risk factor of crops failures either of heavy rainfall or less rainfall or dry and wet drought

- 1) Raising a varieties of crops on arable land is known as crop diversification.
- 2) Diversification of cropping pattern means raising varieties of crops for a areable lands. It is the reflection of physical socio-economical and techeno organization inputs. Crop

diversification indicates multiplication of agricultural crops, which involves intense competition for regions, scope for crop rotation and effect of double cropping In most of the extensive agricultural parts in world agricultural diversification. It is common feature due to irrigation use of chemical fertilizers and pesticides, high yielding variety of crops, mechanization and techenology. Besides climate, farmer's attitude and local surrounding are forced farmers for crop diversification. Many Geographers and Economist have applied diversification concept in verieties of sense. Clean (1930) initially applied this concept in order to identify the degree of diversification and concentration in manufacturing field. Later on Tree (1938), Horence (1942) and Rainwald (1949), Gibbs martin (1974) have used this concepts of diversification for computing measurements of diversification for of employment in Industries. Bhatia (1965) has applied crop diversification techenique in India



to understand crop cultivation. This Technique provided a method for generalizing relation between the relative strength and number of crops grown in study region. In this formula he has considered the cropped area for computing crop diversification. He Considered only those crops that individually occupy ten percentage or more of occupied area in regional unit. Bhatia's formula was modified by jasbirsingh (1976) and Ayyer (1969). The data regarding crop diversification have obtained for (2000-2005) to 2006-2011) over period of 10 years from department of Revenue, Talathi, Tahashildar, Agricultural department of Chandrapur districts. These obtained data was later on converted into percentage to total geographical area and then categorized into various groups for identification of crop diversification. The volume of change has studied for ten years in this paper Chandrapur districts.

HYPOTHESIS

1. Crop diversification is improvement of economic condition to farmers.
2. Crop diversification it is a attitude of farmers.
3. Crop diversification has usually been done by the farmers to enhance nitrogen in the soil and to reple nish the soil fertility.

THE STUDY AREA

Chandrapur districts the Easter most of the Districts of Maharashtra State lies between 18^o41' and 20^o50 North Latitude and 78^o48' and 80^o55' East Latitude. The biggest of the districts of the state of Maharashtra area. Chandrapur districts covers a surface area of 26128.7 km² (10088.3 miles²) geographically speaking the districts lies in the eastern part of Godavari basin. Three large and important tributaries of the Godavari viz. The Wardha, The Wainganga both are which together constitute pranhita and the Indravati drain the Western central and eastern parts of the districts respectively



geographically the district passages as consideringly camp textities with rock formation belonging the period ranging from the archaean basement complex to the recent tertiary alluvium. A part of the districts lies in the Painganga, Wardha lift which perhaps is the latest period of each distribuance affecting that top a graphical and geological history of the districts.

Since January 1964 Chanda town has been rename Chandrapur for administrative purposes the district also divided into 2 part Gadchiroli districts also separated 26 August 1982 Chandrapur district is full of forest, Minerals, Coal, Limestone and Sandstone Now a days total geographical area of Chandrapur district is 1144352 km. and total forest area 351952 km. Near about 30 % is forest and 70 percent of total area covered by many other land use pattern Tadoba Andhari Tiger Project it is a very mostful to Tiger and other wild animals, line deer, foxes, Bieson bear, leopard, Jungle cat, leopard cat, wild dog,

jackal, wolf, Monkey and others Butterflies and Snakes also.

In this study area Wardha, Wainganga, Irai, Mul, Kothari, Sati Nala, Buti Nadi, Zarpot river, Andheri ans Same Lake also build by Govt. Naleswar, Chargaon, Asolamenda, Labhansarad, Amalnala, Chaindai nala, Ghodazari, Mul, Lohara, Junona, Ghodpeth etc.

The districts of Chandrapur rich in a variety of resources, agricultural and minerals and forest wealth it is a relatively under population region of the state and even of the country. It is a peripheral location trible population the forest and hilly nature of the terrain lack of accessibility have all made the districts less prograessive in its economy through the potential resources warrant a more an tense use of them. The district is a vareiable ethological museum and cultural fusion brought about by the mixing of different groups of people in indeed very fascinating.

The fairly developed areas of the distrietlie mainly along the



Wardha valley in the Western parts, eastward the population density decreases and at the same time becomes more tribals and backward. The agrarian economy of the districts too, is richly varied, the only surplus tracts of the state being the Wainganga valley in this and the adjoining Bhandara districts. The tank irrigated low lands of the districts offer a sharp contrast to the mill cotton-wheat dominating economy of the monotonous regur soil of the state that almost reach upto the Western parts of the districts. Yields too, compared to the state average are quite high though improvements are certainly possible and desirable.

Chandrapur is rich too in minerals wealth, high grade iron ore, gondwana coal, Chromite, limestone, clays and building stone are all being mined at present but the minerals of the districts await, a fuller prospecting and exploitation. C.T.P.S. it is main power generation and supplies to Maharashtra. ACC Cement, L & T Cement, Manikgarh Cement,

Ordinance Factory Bhadravati, BILT Unit made of Paper mill, High class Teakwood, Furniture market Chandrapur districts divided into 15 taluka. Chandrapur, Ballarpur, Rajura, Gondpipari, Pombhuarna, Bramhapuri, Sindewahi, Nagbhir, Chimur, Warora, Bhadravati every taluka covered agricultural land and forest land mines but agriculture it is most useful economy. Farmers also accept and adopted new technology and chemical fertilizers and growing their crops. Traditionally agriculture backward and new technological accept to agriculture.

OBJECTIVE OF THE STUDY

The present research paper has been undertaken to make an in depth and comprehensive study of crop diversification in Chandrapur district by evaluating following objectives.

- 1) To study the crop diversification of study area.
- 2) To study regional variation in crop diversification to study area.
- 3) Suggesting remedial measure by better crop diversification of study regions.



DATA BASED AND METHODOLOGY

1) The data collection through primary and secondary of sources primary data collection, interview of some farmers who lived in rural area and they were middle class farmers.

2) Secondary data obtained from socio-economic review census, were processed and presented by statistical and cartographic techniques, not only basis of primary and secondary data but with the help of varies statsical and contragraphical method and technique researchers studied spatial and temporal changes in area under crop diversification in Chandrapur districts from (2000-2010).

EXPLANATION

Crop diversification in Chandrapur district is senerally viewed as a shift from traditionally grow less renueative crops to more renunative crops. The crop shif also takes place due to Government policies and thrust on some crops over a given time, for example creation of the technology mission on oil seed to give thrust

on oil seed production, pluses also production due to mission. Market infrastructure, development and certain other price related also aid in crop diversification. An effective strategy for achieving food and nutration security, poverty alternative employment generation, judicious use to land and water researcher Sustanable agricultural development and environmental impowerment from low value to high value crops. From water blowing to water saving crops from single crop to multiple and mixed crops. Many other farmers appling the procedure improved agriculture.

For evaluating the extents of diversification at two point of time duration 2000-2005, 2005-2010 the Bhatia's methods diversification index which provided a cleardisperation of commodities intergeographical area has been computed 15 Tahsils, Bhatia's formula applied to work out crop diversification for the study area.

Index at crop diversification =

$$\frac{\text{Percentage of total crop in 'n' crop}}{\text{Number of 'n' crops}}$$



EXPLANATION : Table No. 1 Show crop diversification of Chandrapur districts and 15 taluka in 2000 to 2005 and 2010-2015 near about 10 years. These are tow span. 5 years. It present regional distributional of crop diversification grouped into Three categories.

1. Area of high diversification (20-30)%
2. Area of moderate diversification 30-40%
3. Area of low diversification above 40%

Table No. 1 and Map A Show crop diversification in the year (2000-2005) High crop diversification is Bramhapuri taluka moderate crop diversification is (30-40%) following taluka bhadravati, Ballarpur, Chandrapur, Gondpipari, Pombhurna, Nagbhir, Rajura, Mul and Saoli But low crop diversification above 40 % is Warora, Korpana and Jiwati Tahasil because only single crop in Korpana and Jiwati Taluka. It is backwards Taluka in Chandrapur district.

Table No. 1 and Map B Show crop diversification in the year (2006-2011) High crop diversification is Bhadravati, Bramhapuri, Ballarpur, Chimur, Mul, Saoli and Gondpipari. Moderate crop diversification is Chandrapur, Jiwati, Korpana, Pobhurna and Sindhewahi and low crop diversification is nagbhir, Warora and Chandrapur Taluka. Total Chandrapur districts averagely crop diversification in the year 2005-2010 is (35.44) at is a moderate and in the year 2010-2015 is 25.77 it is a low crop diversification. Because the farmers adoption of agriculture technology, high yielding varieties, fertilizers use and mechanization pattern of crop diversification may be classified as a field crop plantation crops, commercial crops, flore cultural crops, grasses. In recent years Bramhapuri, Nagbhir, Mul, Saoli horticultural which includes, vegetables, fruits, water million (Tarbuja, Dangra) Production has been recognized as a important avenue for diversification in agricultural in an



eco-farmdly manner through efficient land use optimum utilization of natural resources and creation of employment oportinuties.

EXPLANATION : Table No. 2 Showing Agricultural development to new technology. In this new technology cropping pattern, crop combination, crop rotation and new equipment like ploughing, cutting of crops, Irrigational facilities, tubewell, sprinkle method, dugging well oil engine, motor pump, new varieties of crops, chemicsl fertilizers, pepticides and testing of soil, profile of soil, ph value, acidic and alkaline soil through soil testing department of government of Maharashtra. Taluka and district level marketing of the vegetable, fruits, oil, seed, food grains, processing of food grains, paddi processor and networking of transporting and communication the period of the research paper is 10 years. This 10 years every taluka's farmars also accepeted new technology of agriculture and growing of production of every

crops, monocrops farming during into multicrops, cash crops and vegetable and fruits. Each and every taluka 2005 in monocrops that monocrops only Kharip and some taluka Rabbi crops, but in 2010 they transferred into multicrops and area of agriculture also increasing some taluka bank of river, like Wainganga, Mul, Kothari, Khobragadi, Gadhavi, Irai and Wardha rivers. This total drainage pattern of main Gadavari basin, 2015 also area and crops increasing. In this way development of agricultural and that's are economical developments.

CONCULSION

- 1) Chandrapur district agricultural is gradually diversification to high value food commodities.
- 2) To moderate to high area crop diversification was registered in Bhadravati, Ballarpur, Chimur, Mul, Saoli.
- 3) Area of Moderate crop diversification followd that in the year (2010-2015) Chandrapur, Jiwati, Korpana, Pobhurna and Sindhewahi.



4) The contribution of crop diversification agricultural growth is significant. The study has revealed that crop diversification is the ultimate solution to many problems. It must be viewed as an opportunities particular in low rainfall area, which were rather by present the green revolution phase. It can be used as effective measure to evaluated rural poverty and generally rural employment and conserve natural resources.

5) Therefore, farmers in this area should be guided and trained for

the advanced method of irrigation such as drip, spainklers etc. Which save water and decreases threat of salinities during summer season. It is suggest that farmer in this district should used drip irrigation over does of Chemical fertilizers are responsible for soil degradation. The use of organic agriculture and fertilizer management programme is one of prime requirement in the study area.

Table No. 1: Index of Crop diversification in Chandrapur Districts – 2005 to 2015

Taluka	No. of crop	Area %	Index of diversification	No. of crops	Area %	Index of diversification
Bhadravati	2	60%	30.00	3	65%	21.66
Bramhapuri	3	65%	21.66	3	65%	21.66
Ballarpur	2	70%	35	3	70%	23.33
Chimur	2	80%	40	3	80%	26.66
Chandrapur	2	65%	32.90	2	65%	35.00
Godpipari	2	70%	35	3	70%	23.33
Jiwati	1	60%	60	2	60%	30.00
Korpana	1	65%	65	2	65%	32.50
Pobhurna	2	70%	35	3	70%	23.33
Nagbhir	2	65%	32.50	2	65%	35.00
Rajura	2	70%	35.00	3	70%	23.33
Mul	2	65%	32.50	3	65%	21.66
Saowli	2	70%	35.00	3	70%	23.33
Sindhewahi	2	65%	32.50	2	65%	32.50
Warora	2	80%	40.00	2	80%	40.00
Total	2	72.33	37.444	3	64	25.77

Sources of Data: Authars Computed.

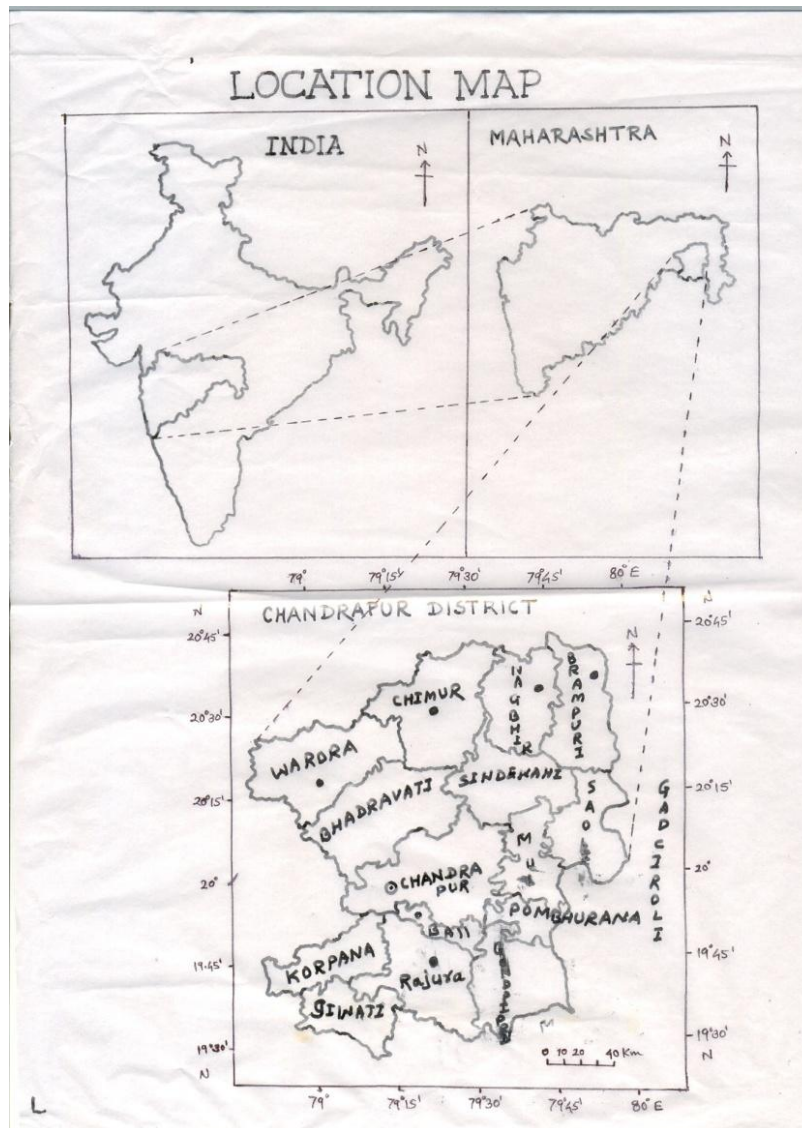
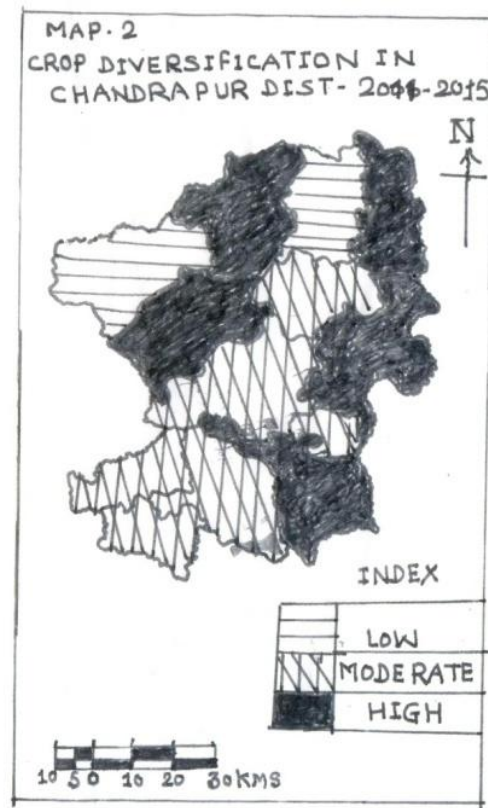
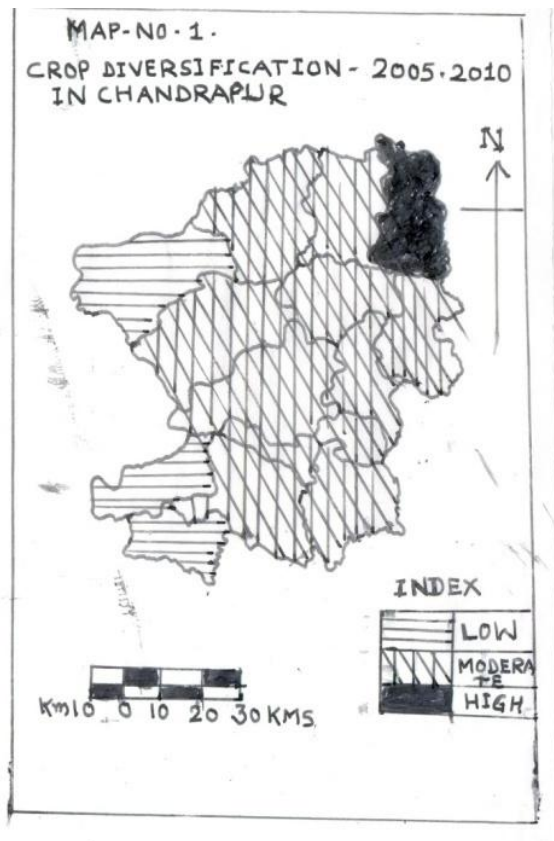


Table No. 2: Agricultural Development through New Technology.

Sr. No.	Taluka	2005		2010		2015	
		No.of Crop	Agri. Area %	No.of Crop	Agri. Area %	No.of Crop	Agri. Area %
1	Bhadravati	1	70	2	80	3	80
2	Brahmapuri	2	80	3	90	4	95
3	Ballarpur	2	80	3	85	3	85
4	Chimuer	1	80	2	85	3	90
5	Chandrapur	1	70	2	80	3	85
6	Gondpipri	2	80	3	85	3	90
7	Jiwati	1	80	2	80	3	85
8	Korpana	2	80	3	80	3	80
9	Pombhurna	2	85	3	90	4	95
10	Nagbhir	2	85	3	90	4	95
11	Rajura	2	85	3	90	4	95
12	Mul	2	85	3	90	4	95
13	Saoli	2	85	3	90	4	95
14	Sindewahi	2	85	2	90	3	90
15	Warora	2	80	3	90	3	95



REFERENCES

- Ali Mohommad (1978) ,Studies in Agricultural Geography Rajesh Publication, New Delhi.
- Andrade B. (1975) The Types of Irrigation farming Applied Science and Development
- Dr. Suresh Fule ,Agricultural Geography Vidhyabharti Prakashan, Latur
- Jasbir Singh Agricultural Geography Tata MC Graw-Hill
- S. S. Dhillon (2004) publishing company Ltd. New Delhi
- Majid Hussain Systemic Agricultural Geography Rawat Publication Jaipur And New Delhi.
- The Gazatteers Department Chandrapur General Geography