

## Agricultural Landuse And Cropping Pattern In Nashik District (Ms)

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### Abstract

*Agriculture is the backbone of Indian Economy. It provides livelihood, employment and agrarian raw material to agro-based industries. Major working force of India is engaged in agriculture, but the agriculture depends upon South-West monsoon, which is uncertain and gambles. Physiography, temperature, rainfall, soil and irrigation influence on the agriculture. The Nashik district is located North West part of Maharashtra state. It lies between 18°33' to 20° 53' North latitude and 73 °16' to 75 °16' East longitude. The district has three important river basins i.e Godavari, Tapi and Damanganga, where agriculture is a dominant activity along with animal husbandry. Ten crops have been considered for crop combination analysis. Food grains, pulses, oilseeds, sugarcane and grapes etc. are the major crops cultivated in this district. The crop data has been computed with the help of Weaver's crop combination method, whereas for cartography ArcGis 10.2 was used. Total Geographical area of the district is 15530 sq. km. which is about 5.04 percent of total area of the state. The average height of the district is 565 meters from the mean sea level. In the present paper an attempt has been made to study the agricultural land use pattern and the crop combination of Nashik district. The entire district has identified six types of crop combination.*

**Key Words:** agriculture, land use pattern, crop combination, weaver's method.

### Introduction:

Agriculture is the backbone of Indian economy. It is the primary activity along with dairy farming, poultry has been considered as a supplementary occupation in India. The physical, socio-economic factors influence on the agriculture and agricultural production of any area of the world. Agricultural land use is the basic structural unit of natural resources. Land is an important factor in agricultural sector and the yield of agricultural crops mainly depends upon fertility of land for raising different crops. The cropping pattern is the central element of agricultural land use.

The distribution of cropping pattern in any region is an outcome of predominance of certain crops or combination of crops, this is in terms resultant of emergence of typical crop combination. The statistical techniques provide accurate and scientific result for the study of agricultural land use and cropping pattern. Various methods of crop combination are invited by various scientists. A course reviews of literature reveals that Weaver, Scoit, Coppock, Doi (1959), Thomas (1963) etc. are some of the important contributors to this field.

### Objectives:

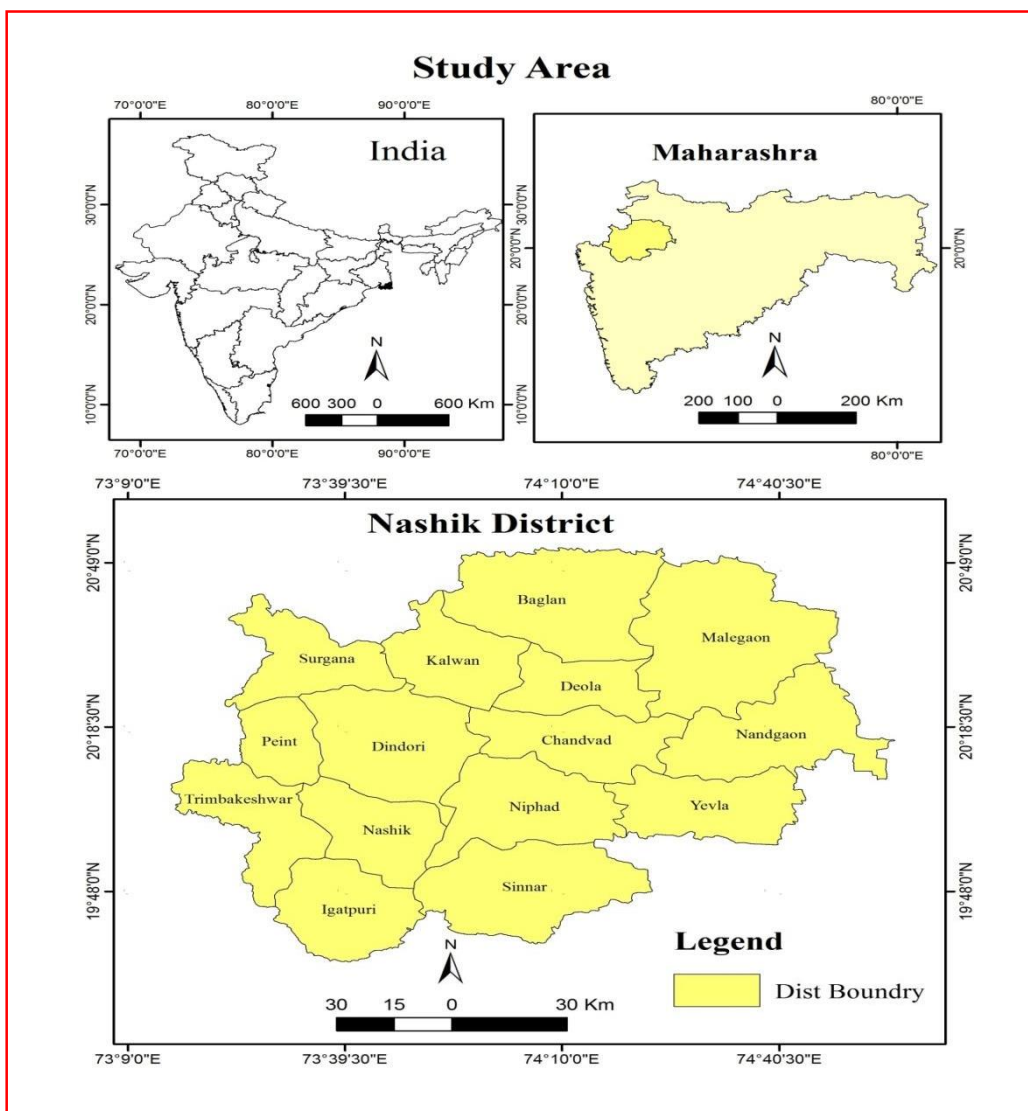
- i.) To study the agricultural land use.
- ii.) To assess the cropping pattern and crop combination regions in Nashik district

### Study Area:

The Nashik district is located North– Western part of Maharashtra state. The area is extended in between 18°33' North to 20°53' North latitude and 73° 16 'East to 75° 16' East longitude at north west part of the Maharashtra state (fig:1.1). It has total fifteen tehsils and covers 15530 sq. km. geographical area, which is about 5.04 percent of the total area of the state. The average height of the district is 556 meters from the mean sea level.

The western part of the district is represented by hilly rugged and dissected terrain of the Western Ghats with peaks like Brahmagiri in Trimbakeshwar and Saptshrungi in Kalwantaluka. A low lying plain marks the eastern southern parts. The eastern part of the district, which lies on the Deccan plateau, is open, fertile and well cultivated. The easterly flowing Godavari and Girna rivers with their tributaries constitute the main drainage system in this district.

### Location Map



**Fig:1.1**

#### Methodology:

The study is based on secondary data and field observations. The secondary data is obtained from the district socio economic review (2016-17) and district census hand books in Nashik district also referred to collected information. Topographical maps and survey of India sheets 1:50000 scales are used for physiographical inventory. For cartography ArcGis 10.2 is used. Microsoft excel is used for statistical techniques to compute the least sum of squared deviation and variance and lowest standard deviation for crop combination.

Weaver’s method has been applied to delineate the crop combination for the following formula:

$$SD = \sqrt{\frac{\sum d^2}{n}}$$

Where: d is the difference between the actual crop percentages in a given area.

n= number of crops in a given combination.

#### Discussion and Analysis:

The district is received rainfall during the south - west monsoon. The average annual rainfall in the district is 1035 mm. Rainfall is very much heavier in the Western Ghats than the rest of the district. In the plateau region to the east rainfall is generally decreases from the west towards the east with some variations due to topography. About 75 percent agriculture land is depending upon monsoon rainfall. Soil is fundamental medium for crops. About five soil types are found in

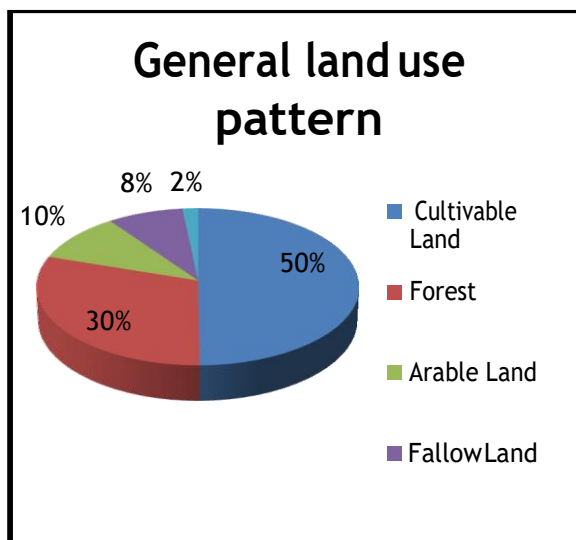
Nashik district i.e. Laterite soil, radish brown or hilly soil, medium black soil, deep black soil and coarse etc. therefore the district have large number of crop variation .

**General land use:**

The District covers 1492704 hectors of geographical area, from which 49.88 percent of land is under cultivation. Table no. 1.1 indicates that 30.18 percent of land is under forest area and about 8.17 percent of land is fallow land permanently and about 1.69 percent of land is not cultivable fallow land. It means 50 percent of the total geographical area is not under cultivation. The total area under cultivation in this district is 744542 hector (49.88), from which, 172831 hectors (11.57%) of land is irrigated and remaining land under cultivation is arable land (dry land farming).

**Table: 1.1 General land use inNashik District**

Sr. No	Types	Area (hector)	%
1	Cultivable Land	744542	49.88
2	Forest	450522	30.18
3	Barren Land	150435	10.08
4	Fallow Land	122030	8.17
5	Not-cultivable fallow Land	25170	1.69



Source: District Socio-Economic Review-2016

Fig: 1.2

**Cropping Pattern:**

In this study region from the total cropped area rice, bajara and maize are major food grains and it occupiearea about 15.32%, 15.95% and 10.375 respectively. Besides this,18.28% area under vegetables, 25.28% area under pulses, and 13.01% area under oilseeds.Along with this the crop rice is cultivated in the high rainfall areas in western part of the district and maize, wheat and other cereal crops are also cultivated where irrigation is available. In the pulses group of crop tur, mug, grams, kulith, udid and others are mostly cultivated in low rainfall areas of the study region. In the groups of oil seeds sunflower, groundnut, soyabean and other oil seeds are grown in dry farming as well as in irrigated patches of the district. The cash crops like sugarcane and grapes, guava,pomegranate fruits and vegetables are also cultivated in various parts of the district.

In this study region rice is major crop in Trambak, Surgana and Peth tehsil. Nashik and Niphad both tehsil are famous for grapes.Igatpuri and Niphadtehsils are cultivate sugarcane cash crops. Vegetables, pulses and oil seeds are grown all over district, but productivity is less or more according to physiography and rainfall.

**Table 1.2 Tehsil wise Area under Various Crops in Nashik District**

Sr. No.	Tehsil	Area under Crops (in %)										
		Rice	Wheat	Jawar	Bajara	Mai ze	Sugarcane	Grapes	Vegetables	Pulses	Oil seeds	Total
1	Surgana	65.91	1.11	1.57	0.01	00	0.02	0.11	0.65	23.57	7.02	100
2	Kalvan	9.89	8.09	0.91	10.29	32.16	5.41	0.23	14.16	8.17	10.63	100
3	Dewala	00	3.10	0.19	34.20	32.93	1.07	0.15	19.39	6.61	2.32	100
4	Baglan	2.66	4.07	0.28	44.29	22.73	3.71	2.17	9.21	8.09	2.72	100
5	Malegaon	0.03	3.83	3.18	47.80	19.64	1.22	0.30	11.40	6.34	6.22	100
6	Nandgaon	00	00	00	00	00	00	0.12	90.27	7.32	2.27	100
7	Chandwad	0.10	1.87	0.09	31.34	19.17	0.12	6.24	27.62	9.25	4.13	100
8	Dindori	16.38	14.03	1.06	0.27	2.48	5.82	00	0.97	42.54	16.40	100
9	Peth	64.57	3.84	00	00	00	0.35	0.05	0.50	22.94	7.73	100
10	Trambak	66.73	1.94	00	00	00	0.33	0.58	2.06	17.57	10.76	100
11	Nashik	00	15.50	0.16	1.18	00	0.70	31.15	17.61	3.78	29.89	100
12	Igatpuri	00	00	00	00	00	14.62	3.18	24.55	34.67	22.96	100
13	Sinnar	3.42	00	4.07	42.57	1.24	5.68	3.15	13.14	10.44	16.26	100
14	Niphad	0.12	14.69	0.04	4.76	0.32	12.58	23.58	19.70	13.85	10.30	100
15	Yewala	00	5.51	1.42	22.55	24.93	0.75	0.51	23.02	14.74	6.52	100

Source: District Socio-economic Review-2016-17.

**Crop Combination semi statistical method analysis:**

Weaver has done very first crop combination in 1954. Crop combination method is a set or an association of two or more crops that are grown in combination. The main objective of crop combination method is to analysis a group of all dominant crops and there by determine crop association region. Weaver’s lowest standard deviation and co-efficient of variation formula has been used for this study and analysis year 2016-17.

**Crop Combination:**

The minimum deviation method of John C. Weaver has been adopted for delineating crop combination regions in the Nashik district. According to this method, it comes to know that two tehsils of the district have two cropping combination, three tehsils have three crop combination, four tehsils have four crop combination, Niphad tehsil having six crop combination and Kalvan tehsil also having eight crop combination and four tehsils having all crop combinations (Table:1.3 and Fig: 1.3 ). In this present study, mono crop combination did not identified but two crop combinations are identified in Surgana&Peth tehsil. The crops Rice and pulses are dominant in Surgana(Rice 65.91% &Pulses 23.57%) and Peth(Rice 64.57&Pulses 22.94%) tehsil. Along with these major crop grapes, sugarcane, oilseeds are also associated. In the tehsil Devala, chandwad and Trambakbajara, vegetables

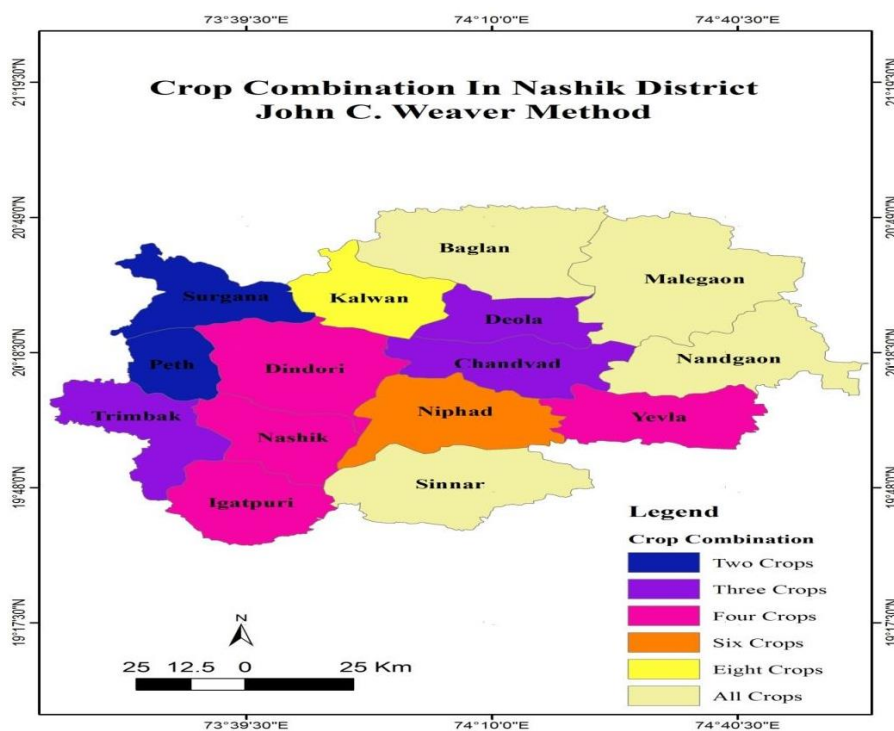
and pulses are the major crops cultivated in association with maize, oilseeds and other crops. Baglan, Malegaon, Nandgaon and Sinnar tehsil are having all crops combination in the district Table-1.3).

**Table: 1.3 Crop Combinations in Nashik District**

Sr. No	Tehsil	Crop Combination	Crops
1	Surgana	2	RP
2	Kalvan	8	MVOBRPWS
3	Dewala	3	BMV
4	Baglan	10	All crops
5	Malegaon	10	All crops
6	Nandgaon	10	All crops
7	Chandvad	3	BVM
8	Dindori	4	PORW
9	Peth	2	RP
10	Trambak	3	RPO
11	Nashik	4	GOVW
12	Igatpuri	4	PVOS
13	Sinnar	10	All crops
14	Niphad	6	GVWPSO
15	Yewala	4	MVBP

*Source: Computed by Researcher*

Abbreviations:-R-rice, P-pulses, G-grapes, M-maize, O-oilseeds, B-bajara, W- wheat, S-sugarcane, V-vegetable, J-jawar.



### Conclusion:

The Nashik district is still subsistent in crop production. From the total geographical area of the district about 50 % areas cultivable land. The cash crops and rice is cultivated in the high rainfall areas of the district and on the other hand oilseeds, pulses, jawar and bajaran crops are cultivate in low rainfall area. The largest cultivable land is observed in Baglan (93.88%) tehsil and lowest in Dindori (15.75%) tehsil in the district. In the study area it is observed that Surgana and Peth tehsils having two crop combinations and Dewala, Chandvad and Trambak tehsils having three crop combinations. The four tehsils named Baglan, Malegaon, Nandgaon and Sinnar having all crop combinations.

### References:

1. Agrawal A. N. '(1980) Indian Agriculture- Problems, Progress and Prospects, Vikas Publishing House Pvt. Ltd. Sahibabad, U.P.
2. District Socio-economic reviews and district statistical abstract in Nashik district, 2016-17
3. Dr. T. N. Lokhande and A. G. Nimase,' (2013) Cropping Pattern and Agricultural Land use in Mohaol Tahsil of Solapur District (MS), Indian Journal of Applied Research, vol. 03 Issue:11 Nov. 2013 Research paper
4. Jasbir Sing and Dhillon S.S. , "Agricultural Geography" Tata McGraw hill publishing company Ltd. New Delhi 1984.
5. Majid Hsain, '(1992) Crop Combination in Uttar Pradesh- A Study of Methodology vol.44 No.2.
6. M. F. Siddiqi, 'Agricultural land use in black soil regions of Bundelkhand, Geographical review of India', vol. 35 No. 4.
7. Nashik District Census Handbook-2011
8. T. C Sharma., O. Coutinho., '(2001) Economic and Commercial Geography of India, Vikas Publishing House Pvt. Ltd, New Delhi.
9. <http://www.maharashtra.govt.in>
10. <http://mahades.maharashtra.gov.in>

## Modern Techniques in Agriculture

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### Abstract

India is recognized as the second largest farming country in the world, rich in crops and cultivable land resources. The country has a rich layer of agricultural and farming fields spread across its length and breadth. Many examples of loss, tragedy, poor quality, and misery are associated with [agricultural and farming industry in India](#). Many industries are witnessing rapid growth and expansion, but it seems cultivation sector was not given much attention to. Number of farmers still continues to use age-old techniques for farming in an era when other farming countries across the globe have adopted contemporary technology and equipments. Such age-old techniques, lack of agricultural knowledge and limited availability to knowledge has hit the farmers real hard, thereby increasing the number of farmer suicides year by year.

**Key words-** farming, expansion, technology, crop protection, equipment

### Objectives

1. To know the different modern techniques in agriculture.
2. To understand modern and sustainable ways of Agricultural Progress.

### Methodology and Data Collection

The present research article is an informative. The Information required fulfilling the objectives collected from different secondary sources.

### Introduction

Agriculture is main occupation of India and major share of economy occupied by this activity. As agriculture production is reducing so need to enhance the production by implementing new technology. India is agrarian country but due to superstitious, blind faiths and unawareness among farmers, the production from agriculture is not enough to feed the huge population there is need to enhance agriculture production. There are several modern and sustainable ways of practicing productive farming. The ways are beneficial to farmers and consumers.

#### 1. Organic farming

Organic creation offers clean and green production methods without the use of artificial [fertilizers](#) and [pesticides](#) and it achieves a best price in the market place. India has large number of organic producers, which is more than any other country. As non availability of edible biomass is impeding the growth of animal husbandry in India, organic production of protein rich cattle, fish and poultry feed using [biogas](#), by cultivating [Methylococcus capsulated](#) microorganisms with tiny land and water foot print is a solution for ensuring enough protein rich food to the community.

#### 2. Anulek Agrotech

Anulekh focuses on increasing soil productiveness to get higher agricultural productivity and crop yield with lower resource use.. Biosat a soil additive is made of biochar mixed with different organic nutrients. The product preserves soil fertility, traps carbon emissions, maintains the topsoil power and increases crop production, thus reducing self-belief on chemical fertilizers.

#### 3. Mitra

Mitra aims to improve mechanization at horticulture farms with the use of Research and Development and high quality farm equipment. Air blast sprayers: Developed for fruits and vegetables in general, and grapes and pomegranates in particular, the sprayers, used to add hormones that help the growth of crops, reduce the expenses on manual labour and are less time-consuming.

#### 4. Crop in Technique

It provides agro businesses the technology and expertise to create a smarter and safer food supply for consumers around the world. Crop In is helps to obtain information on a cloud-based platform, integrated with a mobile app for Android. It allows large food companies to track the

growth of crops on farms around the country with details about what the crop is and the conditions it is grown in to help companies remotely monitor farms, interact with farmers and make every crop apparent and traceable. It also aids farmers in adopting universal agricultural practices and improves productivity by offering productivity insights and yield forecasts.

### **5. Eruvaka**

Mission this technology is to accelerate the use of technology in aquaculture, an area where farmers face problems due to unavailability of adequate technology to measure and control water health. Eruvaka technology, to help farmers monitor aquaculture ponds, develops solar-powered breaking buoys that measure different water parameters, such as oxygen levels, temperature and pH range, critical for the growth and endurance of fish and shrimp. The collected information is uploaded on the cloud and transmitted to individual customers through an Android app, sms, voice call or the internet. Cultivators can also remotely control robotic equipment such as aerators and feeders.

### **6. Sky met**

Sky met is India's largest weather monitoring and agro-risk solutions business. They are the experts in measuring, predicting, and limiting climate risk to agriculture, thus reducing losses incurred due to bad climate conditions. Skymet's weather website provides services such as weather forecast, crop insurance and agri-risk management. Prediction of weather conditions can help prepare farmers for a drought or heavy unseasonal precipitation and help them take suitable defensive measures.

### **7. Ekgaon**

Ekgaon Technologies is an IT based network integrator that provides a technology platform and offers a range of services to farmers in rural areas including financial, agricultural inputs and government assistance. A mobile phone enabled financial services delivery platform, it provides information on microfinance institutions and banks for delivery of door-step services such as credit, savings, remittance, insurance, investment and finance. The system is uses mobile, voice recognition, and interactive voice response system and web technologies to provide information on weather, commodity market prices, and soil nutrient management and crop organization.

### **8. Nanotechnology:**

Nanotechnology is extensively helpful in agriculture. This can be useful to protect the crops in the field and they can monitor the growth of plants and detect the diseases in plants. One of the techniques like Electro scoping is helpful to soak up the fertilizers and pesticides in your field. This knowledge is useful in studying the plant's hormones and regulations. Nano barcodes and Nano processing are useful in monitoring the quality of agriculture products. They can encourage the growth of roots and seed germination with the help of auxins. Further Carbon Nano tubes are useful in detecting and killing the pathogens and viruses in the crops.

### **9. Digital Green**

Digital Green is a not-for-profit global development organization that focuses on training farmers to make and show short videos where they record their problems. This technology-enabled behavior change communication that is cost-effective, scalable and brings together researchers, development practitioners, and rural communities to produce and share locally relevant information through videos.

### **10. Frontal Rain Technique**

It delivers affordable advanced technology solutions for emerging companies and takes technology to remote corners of the country. It is extensive suite of products on the cloud for food and agribusinesses. Rain can help companies at every stage of the value chain starting from growing, processing, logistics, wholesale trade, retail trade and exports. This know-how, accessible through desktop, tablet and mobile devices, is used by companies dealing with cargo like spices, herbs, basmati rice, seeds, animal feed, and sea food, dairy and edible oil.

### **11. Agrostar**

It includes direct to farmer m-commerce policy, Agro star strives to provide quality agro inputs at the farmers' doorstep. Agro Star enables farmers to obtain a range of agricultural goods such as seeds, crop nutrition, crop protection and agri-hardware products by simply giving a missed call on the company's 1800 number or through their mobile app to eliminate unavailability of products, poor quality products, replication and adulteration.



## **12. Genetically Modified Organism**

It is helpful in resisting the crops from the damaging chemicals and fertilizers. Some of the parts of the plants are not used for the cropping system. Hence with the help of the GMOs in that portion, we can implement the waste parts of those crops and can be used in the productivity. GMO crops are producing in the laboratories by applying the practices of reproduction and Tissue culture.

## **13. Barrix Ago Sciences**

This technique offers eco-friendly crop protection methods after much research on products that support organic farming to increase crop produce and quality with minimal expenditure. Toxic pesticides pollute water, soil and leave behind harmful residue, besides being expensive. Barrix's pheromone-based pest control traps have synthetically synthesized smelling agents that attracts and traps pests. Instead of eating the crops, the pests are attracted to the pheromones in the traps.

## **14. Breeding**

Plant breeding can boost the yield and productivity of the crops. This is useful in developing new varieties of a crop from a single crop. Also, the evolution of new crops can be done by the Hybridization, Tissue culture. You can introduce Sexual reproductive plants. With the help of cutting and budding, we can introduce the vegetative duplicate of plants. In the current era, reproduction is a necessary evil since it gives a huge chance for the cultivators.

## **15. Techniques of Tissue Culture:**

This is used to produce a number of varieties of crops from the single genome of the plant. These are used to produce a number of crops at fewer places. In this process, we can produce the varieties of crops which can give more yield of product and at the same time, they are highly resistant to the diseases. They can grow easily without the relevance of fertilizers and pesticides. Hence this is one of the best things that you can use in India.

## **16. GPS Technology:**

Global Positioning System technology is widely using by the large cultivators. By applying the GPS devices to your tractors you can set your mechanism in auto driving mode, in this process you can plough your field easily without using humans. We have to set the programmes and order to do the farming, sowing; seedling, watering and even we can set it to apply fertilizers in your field. By applying this technique farmers can save their time and money in variable aspects. Even the farmers can work during the low visibility in the field during High temperature of sunlight, rainy season, in the smoggy and dusty condition.

## **17. Agricultural Drones**

The government of India has announced its support for use of [agricultural drones](#) that are already popular in the West. Drones are unmanned aerial vehicles equipped with sensors and thermal cameras that can fly over fields and monitor the condition of the crops. These aerial vehicles can give farmers exact information about the situation of the soil, crops, excessive dampness or erosion, pest related problems etc. in real time. Drones are help spot flaws in the fields at the earliest, giving farmers the chance to correct the problem before it is too late, thanks to its integrated GIS mapping and crop health imaging systems. It can help farmers establish where more irrigation is needed and where water supply has to be restricted.

## **Conclusion**

The modern agricultural techniques not only boosting the agro production but also can bring drastic change in standard living of cultivators. As it is need of era. The Indian government also started implementing effective procedures, emphasizing on the use of contemporary agriculture techniques.

## **Reference**

1. Sikkim races on organic route. Telegraph India. 12 December 2011.
2. Indian Agriculture in Brief 2000: Directorate of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India, New Delhi.

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rkMu ikQ djhy R;k[kyy tehu ngk o"kkP;k djjkju ofgokVkoh R;kP;k ekydh gDdk■k Bh  
ljdkjr FkkM dj Hkjkok- T;kuk >kMh rkMu tehu ikQ dj.;kph ,ir uly R;kuk Jher  
fucjkt rxkP;k Lo#ikr dt fny- R;keG tehu yxokMh[kkyh vkyh- ;kf'kok; ■LFkkukr uohu  
xko clou iR;d xkoP;k lhek Bjou iR;d xkokyk 'kHj r look'k ,dj pkoj tehu n.;kr  
vkyh- xkoP;k dkjHkkj■k Bh ikVhy dyd.kh] n'kiM ;k orunkjP;k ue.kdk dY;k- R;keG  
'krhP;k ckrhr R;kP;k dkGkr fodk■ ?kMu vkyk- ;kf'kok; Jher fucjkt nllj g vkiiY;k  
■LFkkukr nkj dk<u vkiiY;k itph Lor% fopjiil djir- R;keG 'krdu;koj vU;k; tye >ky  
ukghr-

**Jher lkgcthckb mQ c;kllgc o "krhll/kkj.kk %**

QyV.k llFkkuP;k lRrkf/k'kkuh Jher lkgcthckb ;kuh lu 1828 r 1853 ;k dkGkr jkT; dkjHkkj d#u 'krhP;k fodkllr Hkj ?kkryh- R;kuh vkiiY;k llFkkukr egly 0;oLFkk pxyh d#u vkiiY;k llFkkup mRiUu pxy ok<oy- lu 1842&42 e/; llFkkup mRiUu 6420 ;i; gkr r 1842&43 e/; 26948 #i; brd ok<foy gkr- R;keG 'krh 0;o llk;kr pxyh ll/kkj.kk gkÅu llFkkukoj dlygh dt uOgr-

**Jher e/krth egjkt o "krhll/kkj.kk %**

QyV.k llFkkup 24 o jkT;dr Jher e/krth egjkt ;kuh b-l-1860 r 1916 ;k dkGkr jkT;dkjHkkj dyk- R;kP;kp dkGkr QyV.k llFkkuP;k vk/kfudhdj.kkyk l#okr >kyh- R;kuh 'kr {k=kr cgey ll/kkj.kk dY;k- Jher e/krthjkokuh fcVh'k vf/kdkU;kuk exn'kukulj tfeuhpk lOg d#u tfeuhP;k irokjhulj egly Bjfo.;kr vkyk- xkoirkGhoj tehu egly oly dj.;kp dke xkorykBh djr vlr- R;k l eydh ikVhy enr djr vlr- ekeyrnkj gk llFkkuP;k e[; dkjHkkjP;k vf/kiiR;k[kkyh olykp dke djr vl- llFkkukrhy 'krllU;kp nj fuf'pr dj.;k llkHh ikp xV ikM.;kr vky gkr- lu 1883&84 e/; iFkep Jher e/krthjkt ;kuh Lorh dkgH xkokuk HkVh nÅu rFkhy ikg.kh d#u tekchnp dke Lorh dy o j;ryk fnyY;k tek ikOR;k rilu ifgY;k-

;kf'kok; QyV.k llFkkukrhy lrrP;k n"dkGkeG 'krdjh llodkjP;k dtkeG dtcktjh >kyk- v'kk oGh Jher e/krth egjktkuh 'krdu;kuk 'krhllkHh dtijoBk dyk- rlp 'krdu;kp dt ekQ dj.;kr vky gkr- rlp foghjh [kkn.;k llkHh 'krdjh oxkyk rxkbP;k Lo#iir dt ijoBk d#u 1898 e/; QyV.k llFkkukr 2218 foghjh gkr; R;k llkHh 20]000@& #i; rxkbP;k Lo#iir n.;kr vky gkr- dkgH fBdk.kh c/kkj o ikV c/kkj gkr- Jher e/krthjkokuh 'krhe/; uohu r= o vk/kfud 'kkl=h; ekfgrhpk illj dj.k ;k llkHh 'krdjh llkph LFkkiuk 1899 e/; dyh vkg-

QyV.k llFkkukr 1896 e/; n"dkG iMyk- R;koGh Jher e/krth egjktkuh ck.kxxk unhoj c/kkjck ck/kyk- R;k llkHh 1559 #i; 14 vk.k 11 i- [kp dyk- ;k c/kkU;keG 500 ,dj tfeuhyk ik.kh feG yxy- llFkkukrhy dkiMxko ;Fkhy vk<;koj ,d c/kkjck ck/kyk- R;keG 300 ,dj tehu flpuk[kkyh vkyh- rlp djxko ;Fk gh ,d c/kkjck ck/k.;kr ;Åu rFkhy tehu flpuk[kkyh vkyh- 'krhpk fodkll Oggok ;k llkHh Jher e/krth egjkt ;kuh 'krdu;kuk 'krllU;kp llV fnyh- R;keG R;kP;k dkGkr 'krhpk fodkll ?kMu vkyk-

**Jher ekykthjkt o "krhll/kkj.kk %**

QyV.k llFkkup 'koVp o 25 o jkT;dr Jher ekykthjkt ;kuh lu 1917 r 1948 ;k dkGkr jkT;dkjHkkj d#u vkiiY llFkku vf/kd ixr cufoy- itp dY;k.k gp vkiiY dY;k.k gh Jher ekykthjktkph Hkkouk vliY;ku R;kuh 'krh ll/kkj.;k llkHh fo'k'k i;Ru dy- vkiiY;k llFkkukrhy 'krdjh oxkyk HkkMoy ijoBk dj.;k llkHh lgdkjh pGoGhpk illj d#u lu 1918 e/; fn QyV.k cdph LFkkiuk dyh- i< gh cd lu 1926 e/; Jh y{Ekh llVy dk&vkii cdr foyhu dyh- ;k cdekQr iR;d xkokry lgdkjh llk;V;kuk dtijoBk dyk- Jher ekykthjktkuh fcVh'k ljdkjckcj dkjHkkj d#u fujk mtok dkyok vk.kyk- R;keG 33 xkokuk 'krhllkHh ik.kh feG yxy- rlp llFkkukrhy brj xokr gh ygku c/kkj ck/k.;kr vky-

QyV.k llFkkukru fujk mtok dkyok xY;keG Allkp mRiUu ok<fo.;kp gru ikMxko ;Fk vkDVkckj 1931 jkt Ål l'kk/ku dnkph LFkkiuk dyh- R;k llkHh Loriph 105 ,dj tehu fnyh- g egjktVkrhy ifgy Ål l'kk/ku dn gk;- rlp 'krhpk mRiUu ok<fo.;k llkHh o 'krdu;kuk vYinjku o pxyY;k ntkp llfgr; feGko ;k gru Jher ekykthjktokuh ch&[kr&vÅr foØhp lgdkjh rRokohy ifgy ndku dk<y- lu 1938 e/; 110 ,djke/; lhm Qkeph LFkkiuk dj.;kr vkyh- ;ke/; oxoxG ch&fc;k.k r;kj dj.;kr ;r gkr-

Lku 1925 e/; QyV.k llFkkukrhy 35 xkokuk fujk mtok dkyok ik.kh feGY;ku Allkp mRiUu ok<y- R;keG fiiGkphokMh ;Fk ecbp eQryy o vkiiV ;kP;k lgk;ku fn- 8 ekp 1933 e/; fn QyV.k 'lxj oDlph LFkkiuk dyh- lu 1942 e/; Jher ekykthjktokuh 79386 #i; [kp d#u xk[kGh fiiijn] ftrh] gkG] ll[kjokMh ;Fkhy ll[kj dj[kku;k illu

ILFkkup mRiUu ok<y- R;keG vkīY;k ILFkkuph lokxh.k ixrh gk.;kllk Bh fn- 21 uk0gcj 1944 e/; Fkkj vFkrK /kut; jko xkMxhG ;kP;k v/; {kr[kkyh ,d iu?kVuk lferh LFkkū dyh-  
**dkjMokg Hkkxkrhy 'krhllk Bh ik.kh ijoBk %**

tfeuhph /ki Fkkcfo.k vkf.k tkxP;k ik.kh ejfo.k g tj dk; dy rj dkjMokg 'krh fuf'pr l/kjr o mRiknu {kerk ok<r ;kllk Bh ik.kh ijoB;kph llku R;kuh nf{k.k Hkkxkr ok<foyh- ;kllk Bh Jher ekytjhkokuh rhu idkjP;k ;ktuk gkrh ?krY;k gkR;k R;kryh ,d ;ktuk v'kh gkrh ILFkkukrhy ck.kxxk unh o vud ygku vk<;kl ck/k ?kkyu ik.kh vMou r 'krhyk n.k] nlljh ;ktuk ygku ygku iDdh /kj.k ck/ku ikV dk<.k] vkf.k frlljh ;ktuk Eg.kt ekriph /kj.k ?kkyu tfeuh[kkyh ik.kh ijoB;kph ok< dj.k ;krup Jher ekytjhkokuh dkjMokg Hkkxkr vud ygku /kj.k ck/kryh gkrh- lu 1942&43 ;k o"kkR ILFkkukrhy vkndh] vkGtij] fch o fujxMh ;Fk 54830 =lk; c/kkj ck/k.;kllk Bh Jher ekytjhkokuh [kp dy-  
**tfeu cfnLrhP;k ;ktuk %**

dkjMokg Hkkxkr T;k fnoIkr 'krkr fid ukgh R;k fnoIkr tehu ck/k.khph dke gkrh ?k.;kr ;r gkrh- tfeuhe/; rkyk ?kky.;kllk Bh rK 0;Drhph ue.kd dyh gkrh- tfeuhe/; rkyh dB ck/kk0;kR R;kph ykch] =nh] mph fdrh vllkoh] ryyh ejekP;k vllk0;kR dh puk] nxM ;kP;k vllk0;kR ;kpk fopkj dyk tkb o R;kclly 'krdu;kuk if'k.k.k n.;kr ;r vll- nf{k.kdMhy mrkjP;k tfeuh o pj [kknu R;ke/; o[kkj iu dy tr- R;keG ik.;kP;k iokgkll tfeuhph /ki Fkkcfo.;kll enr gkb- ;kf'kok; >kMkph ;kx; fuoM 'krdjh djr vly;keG lji.k vkf.k tukojP;k pkU;kpk i'u lvyk tkb-  
**nty 'krh%**

Jher ekytjhkokuh dkjMokg Hkkxkrhy 'krdu;kp 'krhp mRiUu ok<fo.;kllk Bh uohu 'kkl=h; i)rhph dkjMokg 'krh ll= dyh- R;kllk Bh ukxjV vkf.k dGi.kh ;kp Bjfod iek.k o dkG] uohu ch&fc;k.k] [krpk mi; kx] l/kjyyh votkj ;kpk mi; kx d= u 'krhp mRiUu ok<foy- ;kpk illj dj.;kllk Bh 'krdh [kkR;ke/; ,d Lor= foHkkx pky dyk- ;kf'kok; dkjMokg Hkkxkr Jher ekytjhkokuh vud /kj.k ck/kryh R;kryh ck.kxxk unhojhy /kj egUokp vkg- R;keG ckjk gtj ,dj tehu vkfyrk[kkyh vkyh-  
**n"dkGh 'krdu;kph dtekQh %**

QyV.k ILFkkukr ikollkph derjrk vly;ku vud oGk n"dkG iMr vll- rlp 'krdu;kuk rxkbP;k Lo=iR dt fnyh- ;ke/kup 'krhe/; ck/k ?kky.k] rkyh ck/k.k] ygku ekB c/kkj ck/k.k v'kh dke d= u ?kr rlp n"dkGkeG 'krdu;kuk tehu egly Hkj.k 'kD; >ky ukgh rj rk ekQ dyk tkb- lu 1937&38 e/; Jher ekytjhkokuh 51249@& =lk; 'krdu;kph Fkdckdh ekQ dyh-

**llekbd o QM 'krhph i)r %**

Jher ekytjhkokuh vkīY;k ILFkkukr 'krhlc/kh nku vfhkuo i;kx ll= dy gkr- fiin o jtkG ;k xkoh llekbd o QM 'krh i)rh ll= dyh gkrh- okLrfod nklgh i;kx ,dkph i)rip nku idj vkgr- fiin ;Fkhy llekbd 'krh dj.kkj Lor' 'krkp ekyd ukgh vxj R;kuk Lor'p dukyp ik.kh ukgh- Lor'p dkgh ul.kkj ijr ,d= 'krh dj.kkj l?k vll EgVy tkb dkj.k tehu [kMkph] ik.kh nllU;kp] HkkMoy njckjp v'kh ;k l?kph fLFkrh gkrh- ijr v'kgh fLFkrh l?kku ?kryy vtojp HkkMoy ijr dyy vkg- llekbd 'krhe/; fiin ;Fk cUkh ll ,dj Al] 'kHk] ,dj /kku;fid ckxk;r gkrh rj jtkG ;k fBdk.kh ipgUkj ,djR /kku; fid ?k.;kr vkyh gkrh- ;kf'kok; Jher ekytjhkokuh ftrh ;Fk QM 'krh i)rhpk i;kx ll= dyk gkrk- dukyP;k ik.;kph cpr ;k i)rhEG gkr llekbd 'krh cly Jher ekytjhkt Eg.krkr dh] lo ILFkkukr llekbd o QM 'krh i)r =< >kY;kll 'krdjh oxkp Qkj ekB dY;k.k >kY;k[kjhy jkg.kkj ukgh vllk vEgkyk HkjoIk okVrk- v'kkfjru Jher ekytjhkokuh 'krhpk fodll gk.;kllk Bh i;Ru dyy gkr-  
**lekji %**

Jher fucjkt nlljlllu r Jher ekytjhkokP;k i;r iR;d llUkkf/k'kkuh vkīY;k ILFkkukrhy 'krhpk fodll gk.;kllk Bh Qkj i;Ru dyy fnlu ;rkr- rlp tehu egly ok<fo.k] 'krdu;kuk rxkbP;k Lo=iR dt ijoBk dj.k] n"dkGkr dtekQh o 'krllkU;kR lV

n.k] cxxbr 'rhyk mUk tu n.k] lgdjh lllk;Vhp tG fuek.k dj.k ;kllk Bh i;Ru dy- ;k lo  
 llUkkf/k'kkuh 'krh {k=r cgeY; vll ;kxnu fny- R;keG ;Fkhy 'krdjh vkfFkdn"V;k ll{k  
 >ky- R;keG llLFkkuph llkfx.k ixrh >Y;kp fnlu ;r-

### llnHkllph

- 1- QyV.k njckj vkKkif=dk] fn-21 uk0gcj 1894
- 2- QyV.k njckj vkKkif=dk] eksp 1945
- 3- QyV.k njckj vkKkif=dk, fn- 10 tkuokjh 1930
- 4- QyV.k llLFkkupk okf"kd i'kkldh; vgoky] lu 1893&97
- 5- QyV.k njckj jdkM
- 6- cMdhgG jfon %llik-%] QyV.k oHko n'ku] egkj"V llkfgR; ifj"kn] QyV.k 2011
- 7- Choksy R.D. : Raja of Satara, Poona, 1970
- 8- Hkkly f'koktjhko %llik%] jktllgc Lejf.kdk] fn- 8 tkuokjh 1983-
- 9- n- Lfk;] fn- 19@11@2012-
- 10- llR;oknh] nf{k.kh llLFkkukrhy [kkll vd- lu 1940-
- 11- n'ke[k fo'oklljko] ekytjhjt Jher ekytjhjt ifr"Bku] QyV.k 2004-
- 12- Jher f'koktjhjt %llik%] j;r lod ekytjhjt Jher ekytjhjt ifr"Bku] QyV.k 1997
- 13- Jh- ykykllgc ukbd fuckGdj ;kph eyk[kr] fn- 12 vkDVkcj 2018-

## chM ftYgÓkrhy itU;ekukpk Hkxkfyd vH;k

vely ckyklkgc yOgkG]

la”ks/kd fo [kfhZ]Hh”kkL= lady] Lok- jk- rh -e- fo [kihB] uknM-

Ml- Ogh- vkj- jkBlM]

Hlxky foHkxkie[k] olarjko ukbid egkfo [ky; oLj .kh] ulnM-

### Lkajk”k

Hkkjrkrhy ik.kh ghie[k leL;kvkgs- ik.kh gk ekuoh ftoukpk vR;ar vko”;d vIk ulfxd ?kVd vIwu ik.;kf”kok; ek.lll QkjdkG tx “kdr ukgh- R;keGs ekuoh ftouke;/s ik.;kyk vU;lk/kkj.k egRo vkgs- ijr fnolsfnoI deh gksr tk.kkj itU; vkf.k ekuokP;k ik.kh okijkckcrp f<lkG fu;ktu ;keGs ik.;kph leL;k fnolsfnoI fcdV gkr vkgs- laiw.l Hkkjr ;k leL;syk rkM nr vkgs- rlsP egkj’Vkrhy chM ftYgkgh ;k leL;syk rksM nr vkgs- chM ftYgkkg egkj’Vkrhy vko”l.kxLr {s=ke;/s ;srks- R;keG ;k Hkxkrrqyuu [lip deh itU; iMrs- rlsP chM ftYgÓkrhy ik.kh iz”ukph frork xY;k dkgh o”kkiklwu ok<rp vIY;kp fun”lukl ;rs- dkj.k dkgh o”kkiklwu itU;kp izek.kgs njo”wz deh&deh glr vIY;kp fun”lukl ;srs- chM ftYgÓkrhy ik.kh iz”u gk ;sfky turyk HsMlko.kkjh vkiRrh fueL.k glr vkgs-  
**chtllk % itU;kp iek.k] itU;krhy rQkor-**

### iLrkouk %

ekuoh ftoukr ik.;kyk vfr”k; egrokp LFkku vkgs- dkj.k ik.;kf”kok; ekuoh ftoukph dYiuk dyh tko “kdr ukgh- Hkkjrkrhy n’dkGgh leL;k Qkj vfydMhy leL;k vkg] vls ukgh rj [iio”kkiklwu n’dkGkp iwjko vki.kkl vk<Grkr- ijr ik.;kpk viO;; n[khy e;kZfnrp gkrk- vfydMhy dkGr tkxfrdikrGhoj ik.;kpk gk.kkj viO;;] ik.;kp gks.kkj izn’k.k ;keGs Hkfo’;kr tkxfrdikrGhoj ik.;kph rhoVpkb gkso “kdr- Eg.lw vktiklwup ik.;kp ;ksX; fu;ks<tu dy rj Hkfo’;kr fueL.k gks.kkU;k ik.kh leL;spH lksMo.lid dy tko “kdrs-

chM ftYgÓkrhy iM.kkj itU; o ik.kh okij ;kpk fopkj dyk vlrk chM ftYgÓkr ik.kh iz”ugk vud o”kkiklwupH leL;k vkgs-rjhgh ik.;kph leL;k tk.kors- dkj.k okgwu tk.kkj ik.;kp o unH; kik.;kp ;ksX; fu;ks<tu dyy uIY;ku chM ftYgÓkrhy ik.kh iz”u vf/kd tJ /kjr vkgs-  
**vH;kll {s= %**

chM ftYgk vijxckcn foHkxkP;k if”peL e;/Hkxkh olyyyk vkgs- gk ftYgk 18°28\* mRrjr19°28\* mRrj v{koRkoj rj j[kkoRrh; foLrkj 74°54\* rs74°57\* iwo j[kkoRr nJE;ku vkg-chM ftYgÓkP;k mRrjll vijxckcn o tkyuk] iwoI ijHk.kh o ykrwj ftYgs vkgr- nf{k.kll mLekukckn o vgenuxj ftYg vkgs- chM ftYgÓkP;k ,d.k {s=QG 10638-55 pl-fd-eh- vlu r egkj’VkrP;k 3-45 Vdd ,o< vkgs- ;k {s=QGkiSdh 40-25 pl-fd-eh- {s=QG ukxjh Hkxkr vkgs-

tux.kuk o”l 2011 izek.lis chM ftYgÓkph ,d.k yidla[;k 25-85 y{k brdh vkg- rj 2001 P;krqyur njok’lid ok<hpknj gkjh 196-2 brdk ;srks-chM ftYgÓkrhy ckyk?kkVP;k Mlsxjjlxke;/s vud u|lpk mxe gksrk- ;ke;/s el;tj]k fl/kQuk] fcnlkj]k dMfydk] ljLorh o oku br;knH u|k chM ftYgÓkr mxe ikAu oxoxGÓk fn”weuk okgrkr- ftYgÓkr ;k vud u|k vlu ;k lou|k lolk/kkj.ki.lis mUgkGÓkr dkjMÓk vlrkr- mfn’V%

- chM ftYgÓkph ljkljh itU;ekukpk vH;kl dj.lis-
- chM ftYgÓkph itU;krhy rQkor vH;kl.lis-

**l'kk/ku i)rh o vk/kkjlkexh ladyu %**

chM ftYgÓkph **ljkljh itU**;ekukpk vH;kl dj.;klkBh n;<sub>;</sub>e Lo:ikP;k vk/kkj lkexhP;k vk/kkj fo"y'k.kd#.k fu'd'k dk<.:kpk iz;Ru dyk vks- rlsP n;<sub>;</sub>e Lo:ikP;k vkdMokjhkBh chM ftYgÓkpk tux.kuk vgoj]rglhy dk;kZy;]chM ftYgk lkekftd o vKfKZd lekyspu] tylink dk;kZy;] fofo/k iqLrd] ekfld] "ks/kizca/k o ladrLFkGs ;kru ekfgrh ldfyr dyh vks- fo"K; foopu"

chM ftYgÓkrhy **itU**;kpk vH;kl dj.;klkBh 2011 rs 2015 ;k ikp o'wzph rkydkfug; **ljkljh itU**;ekukpk vkdMokjh ?sryy vks- chM ftYgÓkrhy **itU**;kpk vH;kl dyk vlrk ;k ikp o'wzph **ljkljh itU**;eku 538-3 eh-eh- brd vk<Gwu ;srs- lu 2011 ;k o'wz e/s chM ftYgÓke/s loU/khd **itU**; >kyy vlwu rs 734-7 eh-eh- brd vks- rj 2012 lkyh loir deh **itU**; >kY;kp vk<Grs- rlsP 2013 lkyh 667-3 eh-eh-] 2014 lkyh 438-1 eh-eh-] o 2015 lkyh 432-2 eh-eh-] brd vk<Gr-

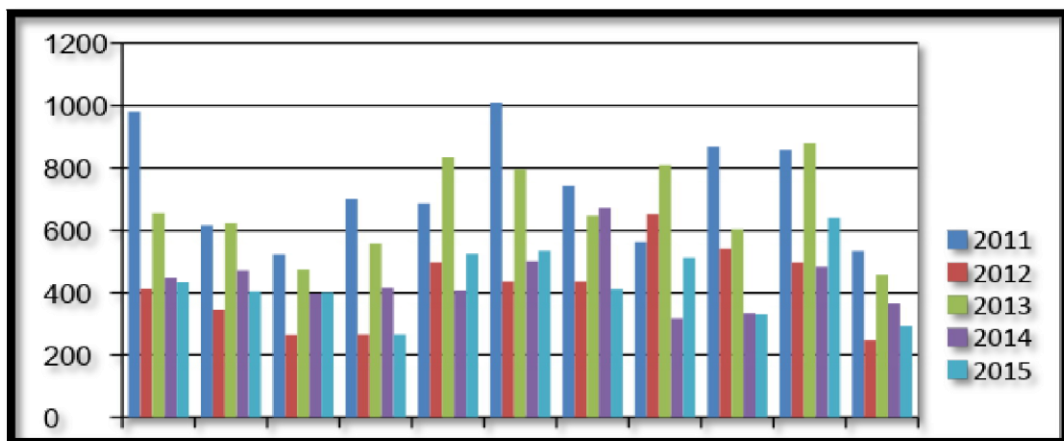
Lkkj.kh % chM ftYgÓkrhy **ljkljh itU**;eku %eh-eh-%

v-d	rkydk	itU;eku %eh-eh-%					ljkljh
		2011	2012	2013	2014	2015	
01	chM	980.0	412.8	655.6	448.8	433.7	586.2
02	ikVsrnk	616.0	346.4	623.7	471.7	404.1	492.4
03	vk'Vh	523.0	265.4	474.2	397.8	401.1	412.3
04	xojkb	701.0	266.4	557.8	416.6	266.4	441.6
05	ektyxio	686.0	497.3	834.0	407.8	524.7	590.0
06	vicktisxb	1009.0	436.2	795.3	501.3	534.7	655.3
07	dt	743.0	436.2	647.3	672.4	412.1	582.2
08	ijGh	563.0	652.4	810.0	318.2	512.4	571.2
09	/kk#j	869.0	541.8	604.0	334.6	330.9	536.1
10	oMo.kh	858.0	497.0	879.8	483.5	640.0	671.7
11	f"K#jdklkj	534.0	248.2	458.2	366.6	294.4	380.3
,d.krkydk		734.7	419.1	667.3	438.1	432.2	538.3

L=kr % d'kh foHkx egjir'V jkT;

vky[k %

chM ftYgÓkrhy **ljkljh itU**;eku %eh-eh-% 2011 rs 2015



chM ftYgÓkrhy rkyD;kfugk; ljkj ih itU;kpk vH;kl dyk vlrk loil/khd iTkZU; oMo.kh rkyD;ke/; 671-7 eh-eh-] brd vk<Grs] rj ;k ikp o'kP;k dkGkr loir deh itU; f'k#jdlkj rkyD;ke/s 380-3 eh-eh-] brd vk<Grs] rj brj rkyD;kpk fopkj dyk vlrk chM 586-2 eh-eh-] iVknk 492-4 eh-eh-] vk'Vh 412-3 eh-eh-] xojkb 441-6 eh-eh-] ektyxko 590-0 eh-eh-] vcktkxkb 655-3 eh-eh-] dt 582-2 eh-eh-] ijGh 571-2 eh-eh- o /kk#j rkyD;ke/s 536-1 eh-eh-]brd ljkj ih itU;eku vk<Gwu ;srs-

**fu'd'k %**

1½ chM ftYgÓke/s itU;ekukr vlekurk vk<Gwu ;srs-

2½ chM ftYgÓkrhy itU;kpk vH;kl dyk vlrk 2011 r 2015 ;k ikpo'kP ljkj ih itU;eku 538-3 eh-eh- brd vk<Gu ;sr-

3½ chM ftYgÓkrhy rkyD;kfugk; itU;eku vH;kly vlrk f'k#jdlkj ;k rkyD;ke/s itU;kpiek.k vfr''k; deh vkgs-

4½ ftYgÓkrhy deh itU;keG chM ftYgÓke/s ugeh ik.;kph Vpkb tk.kors-

**lnHl %&**

1- chM ftYgk tux.kuk vgoky %2011½

2- chM ftYgk lkekftd&vkfkd lekypu vgoky %1991] 2001 o 2011½

3- —'kh vgoky] —'kh dk;kZy; chM ftYgk-

4. Deshpande C.D. (1971) : Geography of Maharashtra, national Book Trust India, New Delhi.

5. Singh, Jashir and Dhillon S. S. (1987) : Agricultural Geography Tata McGraal Hill Publishing C.O.Ltd New Delhi. P 75-80

6. www.google earth.com

7. www. beed.nic.com