Vol 5 Issue 3 Sept 2015

ISSN No :2231-5063

International Multidisciplinary Research Journal





Chief Editor Dr.Tukaram Narayan Shinde

Publisher Mrs.Laxmi Ashok Yakkaldevi Associate Editor Dr.Rajani Dalvi



Welcome to GRT

RNI MAHMUL/2011/38595

ISSN No.2231-5063

Golden Research Thoughts 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

Manichander Thammishetty Ph.d Research Scholar, Faculty of Education IASE, Osmania University, Hyderabad

International Advisory Board

Kamani Perera Regional Center For Strategic Studies, Sri Lanka

Janaki Sinnasamy Librarian, University of Malaya

Romona Mihaila Spiru Haret University, Romania

Delia Serbescu Spiru Haret University, Bucharest, Romania

Anurag Misra DBS College, Kanpur

Titus PopPhD, Partium Christian University, Oradea, Romania

Dept. of Mathematical Sciences, University of South Carolina Aiken Abdullah Sabbagh

Mohammad Hailat

Engineering Studies, Sydney

Ecaterina Patrascu Spiru Haret University, Bucharest

Loredana Bosca Spiru Haret University, Romania

Fabricio Moraes de Almeida Federal University of Rondonia, Brazil

George - Calin SERITAN Faculty of Philosophy and Socio-Political Sciences Al. I. Cuza University, Iasi

Hasan Baktir English Language and Literature Department, Kayseri

Ghayoor Abbas Chotana Dept of Chemistry, Lahore University of Management Sciences[PK]

Anna Maria Constantinovici AL. I. Cuza University, Romania

Ilie Pintea, Spiru Haret University, Romania

Xiaohua Yang PhD, USA

.....More

Editorial Board

Pratap Vyamktrao Naikwade Iresh Swami ASP College Devrukh, Ratnagiri, MS India Ex - VC. Solapur University, Solapur

R. R. Patil Head Geology Department Solapur University, Solapur

Rama Bhosale Prin. and Jt. Director Higher Education, Panvel

Salve R. N. Department of Sociology, Shivaji University,Kolhapur

Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai

Chakane Sanjay Dnyaneshwar Arts, Science & Commerce College, Indapur, Pune

N.S. Dhaygude Ex. Prin. Dayanand College, Solapur

Narendra Kadu Jt. Director Higher Education, Pune

K. M. Bhandarkar Praful Patel College of Education, Gondia

Sonal Singh Vikram University, Ujjain

G. P. Patankar S. D. M. Degree College, Honavar, Karnataka Shaskiya Snatkottar Mahavidyalaya, Dhar

Maj. S. Bakhtiar Choudhary Director, Hyderabad AP India.

S.Parvathi Devi

Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur

R. R. Yalikar Director Managment Institute, Solapur

Umesh Rajderkar Head Humanities & Social Science YCMOU,Nashik

S. R. Pandya Head Education Dept. Mumbai University, Mumbai

Alka Darshan Shrivastava

Rahul Shriram Sudke Devi Ahilya Vishwavidyalaya, Indore

S.KANNAN

Ph.D.-University of Allahabad

Awadhesh Kumar Shirotriya Secretary, Play India Play, Meerut(U.P.)

Sonal Singh, Vikram University, Ujjain Annamalai University, TN

Satish Kumar Kalhotra Maulana Azad National Urdu University

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.org

Golden Research Thoughts ISSN 2231-5063

Impact Factor : 3.4052(UIF) Volume - 5 | Issue - 3 | Sept - 2015



A STUDY OF MANGO CONCENTRATION ANALYSIS IN SOLAPUR DISTRICT OF MAHARASHTRA

Kurle Renukadevi Laxman Assistant proff, Dept.of Geography, Sangameshwar College, Solapur.



ABSTRACT

Mango (Mangifera indica) is the leading fruit crop of India and considered to be the king of fruits. Besides delicious taste, excellent flavor and attractive fragrance, it is rich in vitamin A&C. The tree is hardy in nature, can be grown in a variety of soil and requires comparatively low maintenance costs. Mango fruit is utilized at all stages of its development both in its immature and mature state. Raw fruits are used for making chutney, pickles and juices. The ripe fruits besides being used for desert are also utilized for preparing several products like squashes, syrups, nectars, jams and jellies. The mango kernel also contains 8-10 percent good quality fat which can be used for soap and also as a substitute for cocoa butter in confectionery. According to new research study, mango fruit has been found to protect against colon, breast, leukemia and prostate cancers. Several trial studies suggest that polyphenolic anti-oxidant compounds in mango are known to offer protection against breast and colon cancers. The aim of present paper is to assess the concentration and rank of C.I. of mango fruit cultivation in Solapur district of Maharashtra. The entire investigation is based on secondary sources of data. The data obtained from socio-economic review and District statistical abstract of Solapur district, agricultural data etc. Collected data is processed and presented in the forms of tabular and



graphical. It is also observed that High degree of mango concentration in Barshi, south Solapur, north Solapur and karmala tahsils. Whereas low mango degree of concentration observed in Pandharpur, Sangola, Malshiras and Mangalwedha tahsils.

KEYWORDS :Mango, concentration Index, Rank of C.I.

1

INTRODUCTION:

Mango fruit is referred as "The king of the fruits". Mango fruit is one of the nutritionally rich fruit with unique flavor, fragrance, taste, and thus promoting health benefits to human's .This is also called as super fruit. Mango occupies about 36% of the total area under fruits (2010-11) comprising of 22.97 lack hectares, with a total production of 151.88 lack tones. Uttar Pradesh and Andhra Pradesh are having the largest area under mango each with around 23% of the total area followed by

Karnataka, Bihar, Gujarat and Tamilnadu. Fresh mangoes and mango pulp are the important items of agri-exports from India. India's main export destinations for mango are UAE, Bangladesh, UK, Saudi

Arabia, Nepal, Kuwait, USA and other Middle East countries with a limited quantity being shipped to European market. Although, India is the largest mango producing country, accounting about 45% of world production, the export of fresh fruit is limited to Alphonso and Dashehari varieties. India's share in the world mango market is about 15 percent. Mango accounts for 40 percent of the total fruit exports from the country. There is good scope for increasing the area and productivity of mango in the country.

Mango is one of the delicious tropical seasonal fruit and believed to be originated in the sub-Himalayan plains of Indian subcontinent. Botanically, this exotic fruit belongs to the family of Anacardiaceae, a family that also includes numerous species of tropical-fruiting trees in the flowering plants such as cashew, pistachio,...etc. Mangoes are seasonal fruits; fresh mango fruit season begins by March end when its rich fragrance heralds its arrival in the markets. Mangoes usually harvested while they are green but perfectly matured. Un-ripe ones are extremely sour in taste. Organic mangoes are left to ripe on the tree; however, over-ripe fruits fall off from the tree and tend to get spoiled. In the store, mangoes come in various sizes and colors; therefore, select the one based on the serving size and variety of fruit you love to devour. "Alphonso" variety from India (Maharashtra state) and "sindhuri" (kesar) varieties from Pakistan are known for their uniqueness. Totapuri mangoes feature parrot-beak shape tips, smooth shiny and come in attractive green-yellow or orange colors. Totapuri types are best eaten raw, or while just short of full-ripe stage. Its pulp features a pleasant blend of sweet and tart taste with special mint or clove-like flavor depending on the cultivars. Though there are nearly 1000 varieties of mango in India, only following varieties are grown in different states : Alphonso, Bangalora, Banganpalli, Bombai, Bombay Green, Dashehari, Fazli, Fernandin, Himsagar, Kesar, KishenBhog, Langra, Mankhurd, Mulgoa, Neelam, Samarbehist, Chausa, Suvarnarekha, Vanaraj and Zardalu.

OBJECTIVE:

To assess the Mango concentration region and Rank of C.I. in Solapur district of Maharashtra.

DATA BASE AND METHODOLOGY:

Present study is based on secondary data and field observations. The secondary data obtained from socio-economic review and District statistical abstract of Solapur district, horticulture handbook of Maharashtra state in the year 1991-2011. The area under Mango fruit data obtained from the Zillah Parishad Solapur. Collected data is processed and presented in the forms of tabular and graphical. Tabular from using statistical techniques such as the concentration index (C.I.) Mango will be calculated by Bhatia's (1965) location quotient method as below

x/y

Cx (Crop Concentration Index)

x'/y'

Where,

x is the area under Mango crop in the unit area y is the total Fruit cropped area in the unit area x' is the area under Mango crop in the region y' is the total Fruit cropped area in the region

STUDY AREA:

Solapur district is an administrative district in the state of Maharashtra in India. The district

headquarters are located at Solapur. The Solapur district is bounded by 17°10' to 18°32' North latitudes



and 74°42' to 76°15' East longitudes (Fig No.1). The total geographical area of Solapur district is 14895sq.Km divided in to eleven tahsil and total population of 43, 15,527 according to 2011 census. Climate of Solapur district is dry as daily mean maximum temperature range between 30°c to 37°c and minimum temperature range between 18°c to 21°c with the highest temperature of about 450c in the month of May. The annual average rainfall is 678 mm in Solapur district. The soil of the district essentially derived from the Deccan trap. The soil of the district can broadly classify into three groups shallow, medium and deep soil. In short all over Solapur district is very flat in shape and famous for fertile black soil. Climate of district is favorable for fruit and



vegetables cultivation. The principal Fruits grown in this district are pomegranate, grapes, and mango, Ber, banana and lemon category fruits.

RESULTS AND DISCUSSION:

The perfect knowledge of Mango concentration pattern in a region has been considered to be most useful in the judicious animal husbandry planning. As well as it can be informed that how is the Mango concentration in a given region at a point of time. Mango region can be made based on Mango concentration. 'The term Mango concentration refers to tahsil wise variation in the density of Mango in

Available online at www.lsrj.in

3

study region at a point of time.'

The geographical distribution shows that the area under Mango fruit increasing in the western south western region of the district. But the Mango distribution shows the large variation in the district. Therefore the location quotient method in the form of concentration index (CI) is calculated for each Tahsil of district and further grouped into three categories namely Low, medium and high degree of concentration. If CI value is below 1.00 then area shows low concentration. If CI value is in between 1.00 to 1.50 then area indicate medium crop concentration and if CI value is above 1.50 then that area shows high concentration of crop. Special Pattern of Mango fruit concentration in Solapur District represented from 1991-2011 in given table (Table no 1).

| | CENSUS YEAR | | | | | | | | |
|-------------|-------------|-------|------|-------|-------|------|-------|-------|------|
| | 1991 | | | 2001 | | | 2011 | | |
| Tahsil | Total | Area | | Total | Area | | Total | Area | |
| | Fruit | under | CI | Fruit | under | CI | Fruit | under | CI |
| | Area | Mango | | Area | Mango | | Area | Mango | |
| Karmala | 760 | 92 | 0.84 | 3246 | 932 | 2.33 | 4076 | 401 | 1.38 |
| Madha | 2090 | 244 | 0.80 | 8443 | 761 | 0.73 | 5858 | 460 | 1.09 |
| Barshi | 4910 | 721 | 1.02 | 6803 | 1153 | 1.37 | 5416 | 617 | 1.60 |
| N. Solapur | 9350 | 1245 | 0.92 | 2630 | 355 | 1.09 | 1774 | 260 | 2.07 |
| Mohol | 1400 | 200 | 0.99 | 6143 | 529 | 0.69 | 6204 | 520 | 1.17 |
| Pandharpur | 8890 | 1592 | 1.24 | 10595 | 599 | 0.46 | 11290 | 219 | 0.27 |
| Malshiras | 780 | 32 | 0.28 | 4142 | 570 | 1.11 | 5977 | 198 | 0.46 |
| Sangola | 780 | 92 | 0.82 | 11562 | 549 | 0.38 | 9256 | 237 | 0.36 |
| Mangalwedha | 1880 | 185 | 0.68 | 5840 | 609 | 0.84 | 3121 | 145 | 0.64 |
| S. Solapur | 5570 | 785 | 0.98 | 2673 | 718 | 2.17 | 4826 | 574 | 1.67 |
| Akkalkot | 3300 | 542 | 1.14 | 4466 | 1449 | 2.63 | 3735 | 747 | 2.81 |

TABLE 1 SOLAPUR DISTRICT: CONCENTRATION INDEX OF MANGO CULTIVATION (1991, 2001 AND 2011).

Source: 1) complied by researcher.

2) Socio-Economic Review and District Statistical Abstracts of Solapur District 1991, 2001 and 2011.

From the table no 1, it is observed that in 1990-91 low concentration of Mango was noticed in Malshiras, Mangalwedha, Madha, Sangola, Karmala, North Solapur, South Solapur and Mohol Tahsils. Medium level of Mango concentration was found in Barshi, Akkalkot and Pandharpur Tahsils. High level of Mango concentation was not found in the period of 1990-91. In 2000-01 it is observed that there are six Tahsils namely Pandharpur, Akkalkot, North Solapur, South Solapur, Karmala and Malshiras have experienced change in Mango concentration. In this period Malshiras and North Solapur transformed low level to medium level concentration, South Solapur and Karmala

4



transformed low level to high level concentration where as Pandharpur transformed medium level to low level and Akkalkot transformed medium level to high level concentration of Mango cultivation under the period of investigation (Fig. 1).

However in 2010-11, it is found that within district there are again five Tahsils have experienced

change in degree of concentration. Madha, Mohol Tahsils transformed from low level to medium level



of concentration. North Solapur, Barshi noted change from medium level to high level concentration. Karmala change in high to medium level of Mango concentration.

CONCLUSION:

Mango cultivation is an important economic activity in the study region. It contributes greatly to the agrarian district economy. Mangoes are seasonal fruits; fresh mango fruit season begins by March end when its rich fragrance heralds its arrival in the markets. Organic mangoes are left to ripe on the tree; however, over-ripe fruits fall off from the tree and tend to get spoiled. In the store, mangoes come in various sizes and colors; therefore, select the one based on the serving size and variety of fruit you love to devour. During the year 2010-11, High degree of mango concentration in Barshi, south Solapur, north Solapur and karmala tahsils. Medium degree of mango concentration in Madha, Mohol and karmala tahsils. Whereas low mango degree of concentration observed in Pandharpur, Sangola, Malshiras and Mangalwedha tahsils.

REFERENCE:

1.Chouhan T.S. (1987): Agriculture Geography, Academic publishers, Sangee-Ji-Ka Rasta, Jaipur pp 144-147.

2.Government of Maharashtra (1991): Gazetteer of the Bombay Presidency, Solapur District, The Executive Editor and Secretary Gazetteers Department, Cultural Affairs Department, Government of Maharashtra, Mumbai.

3.Government of Maharashtra: Socio-Economic Review and District Statistical Abstracts, Solapur District, 1991, 2001 and 2011.

4.Dr.Patil Y.V. and Bachhav N.B. (2009) : Pomegranate cultivation in Maharashtra : A cause and concentration analysis, Maharashtra Bhugolshastra Parishad, Vol. XXV, No.1, Jan-June 2009, pp 62-71.
5. Horticulture Department, Zillah Parishad, Solapur.

6.http://www.nutrition-and-you.com/mango-fruit.html.

7.http://agricoop.nic.in/imagedefault/horticulture/Mango%20Cultivation.pdf. 8.https://en.wikipedia.org/wiki/Mango.



Kurle Renukadevi Laxman Assistant proff,Dept.of Geography,Sangameshwar College, Solapur.

6

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 Book Review for publication,you will be pleased to know that our journals are

Associated and Indexed, India

- International Scientific Journal Consortium
- * OPEN J-GATE

Associated and Indexed, USA

- EBSCO
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Databse
- 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
- Directory Of Research Journal Indexing

Golden Research Thoughts

258/34 Raviwar Peth Solapur-413005,Maharashtra Contact-9595359435 E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com Website : www.aygrt.isrj.org