

# Production and Marketing of Agriculture Production in Karnataka

Tammanagouda. S. Goudar<sup>1</sup>, Dr. Nayanatara S. Nayak<sup>2</sup>

<sup>1</sup>Research Scholar, CMDR, Dharwad

<sup>2</sup>Professor, CMDR, Dharwad

## ABSTRACT

Agriculture plays a vital role in India's economy. Around 54.6% of the total workforce is engaged in agriculture and allied sector activities (Census 2011). 42.4% (139.3 million hectares) of the geographical area is reported as net sown area in the country (Agriculture Annual Report, 2021-22). Indian agriculture has been called a "gambling with monsoons" It has always been a risky business and it is subject to changes in the weather.

The concept of crop insurance emerges from the fact that agriculture is subject to uncertainties linked to weather conditions and risks of crop loss due to various reasons including extreme weather variations. Crop failure due to adverse climate and lack of rainfall imposes a heavy burden on the farmers, society, and governments, as they must compensate farmers for the loss to sustain agriculture in the long run.

## INTRODUCTION

- **Agriculture plays a significant role in India's economy.** Around 54.6% of the total workforce they are engaged in agriculture sector and its allied sector activities (Census 2011).
- 139.3 million hectares (42.4%) of the geographical area is reported as net sown area in the country (Agriculture Annual Report, 2021-22).
- Indian agriculture is called as "gambling with monsoon season"
- Indian agriculture is always been a risky business and it is directly to changes in the weather.
- Agriculture and allied sector contributed 9.9% of total export during 2010-11
- Agriculture sector provides employment to 58.2% of country's work force and it is the single largest private sector occupation (Census 2011).
- Indian agriculture is a vital and multifaceted sector that has played a pivotal role in the country's economic and social development for centuries.
- It is deeply rooted in India's history, culture, and traditions, serving as the backbone of the nation's economy. This introduction to Indian agriculture will provide an overview of its key aspects, historical significance, challenges, and contributions to the country's growth.

## Introduction to Onion:

Onion is a one of the important vegetable crop. India is a second highest onion production country in the world around 19.90% compared to the world (Indian Horticulture data base, 2011). In India Karnataka is a second place in the production of onion.

Onions are one of the most widely consumed and versatile vegetables around the world. They belong to the genus *Allium* and are closely related to garlic, shallots, leeks, and chives.

Onions have a long and storied history, playing a significant role in culinary traditions, medicinal practices, and cultural symbolism. In this introduction to onions, we'll explore their key characteristics, historical significance, culinary uses, nutritional value, and cultural importance.

## Key Features of Onion:

**Botanical Classification:** Onions are classified as *Allium cepa* and are part of the lily family, Liliaceae.

### Variety:

Onions come in various shapes, sizes, and colors. The most common types include yellow onions, red onions, and white onions. They can range from sweet and mild to pungent and spicy in flavor.

**Layers:** Onions consist of concentric layers or "skins" with a central core. The innermost layers are typically more tender and mild in flavour, while the outer layers are firmer and stronger in taste.

### Historical Significance:

Onions have been cultivated for thousands of years, with evidence of their use dating back to ancient civilizations in Egypt, Mesopotamia, and the Indus Valley.

They were highly regarded in ancient Egypt, symbolizing eternity and used as offerings to gods and placed in the tombs of pharaohs. Onions were also consumed by Roman soldiers for their believed health benefits.

### **Culinary Uses:**

Onions are a fundamental ingredient in various cuisines worldwide. They add depth of flavour and aroma to dishes. They can be consumed raw in salads, sandwiches, or salsas, and when cooked, they become sweeter and milder, making them a versatile addition to soups, stews, stir-fries, and countless other dishes. Caramelized onions are a popular topping for burgers, pizzas, and various appetizers.

### **Nutritional Values:**

Onions are a low-calorie food but rich in essential nutrients, including vitamins (such as vitamin C and B vitamins) and minerals (like potassium and foliate). They are a good source of dietary fiber, which aids in digestion and helps maintain digestive health. Onions also contain antioxidants, such as quercetin, which may have various health benefits, including anti-inflammatory and anti-cancer properties.

### **Cultural Importance:**

Onions have cultural significance in various parts of the world. They are often associated with symbolism, rituals, and folklore.

In some cultures, onions are believed to ward off evil spirits or provide protection against illness. They are frequently used as a base ingredient for cooking, forming the foundation of many dishes and flavour profiles. In summary, onions are a globally cherished vegetable with a rich history, diverse culinary applications, nutritional value, and cultural significance. Their ability to add depth and flavour to dishes, whether raw or cooked, has made them an essential ingredient in kitchens worldwide, while their health benefits and cultural associations continue to make them an intriguing and versatile vegetable.

### **Introduction to Green gram:**

Green gram, scientifically known as *Vigna radiata*, is a type of legume that is commonly cultivated and consumed in various parts of the world, particularly in Asia. It goes by several other names, including "moong bean" or simply "moong" in some regions. Green gram is highly valued for its nutritional content and versatility in cooking. Here are some key features and information about green gram:

#### **KEY FEATURES OF GREEN GRAM**

### **Appearance:**

Green gram is a small, green, cylindrical-shaped legume with a small white or yellowish spot on one end. The seed is typically oval or elliptical in shape.

### **Nutritional Value:**

Green gram is considered a highly nutritious food. It is an excellent source of plant-based protein, fiber, vitamins

(particularly B vitamins), and minerals (such as iron, magnesium, and potassium).

### **Culinary Uses:**

Green gram is a versatile ingredient used in various culinary preparations. It can be consumed in both its sprouted and whole form. Common dishes made from green gram include soups, stews, curries, and salads. In some cuisines, it's ground into a paste to make sauces or used to prepare sweet dishes like "green gram halwa."

### **Sprouts:**

Green gram sprouts are a popular and nutritious addition to salads and sandwiches. They are rich in enzymes, antioxidants, and vitamins and can be easily grown at home.

### **Health Benefits:**

Consuming green gram is associated with several health benefits, including improved digestion due to its fiber content, enhanced energy levels, and support for muscle and tissue repair due to its protein content.

### **Cultural Significance:**

Green gram is commonly used in traditional Indian cuisine and plays a role in various festivals and rituals. It is often used in vegetarian and vegan diets as a source of essential nutrients.

### **Varieties:**

There are different varieties of green gram, some with specific culinary uses or regional preferences. For example, "split green gram" (moong dal) is a popular form of green gram that is hulled and split. It is used in many Indian dishes.

**Cultivation:** Green gram is relatively easy to cultivate and is grown in a variety of climates, from tropical to subtropical regions. It is an important crop in many Asian countries.

### **Crop Rotation:**

Green gram is sometimes used in crop rotation because it can improve soil fertility by fixing nitrogen in the soil.

**Economic Importance:** Green gram is an important crop for both subsistence farming and commercial agriculture, providing income for farmers and a source of nutrition for many communities.

In summary, green gram is a nutritious and versatile legume that is widely appreciated for its culinary uses, health benefits, and cultural significance. It is an integral part of many traditional cuisines and diets,

particularly in Asia, and continues to be valued for its role in providing essential nutrients and protein to people around the world.

**Need for the Study:**

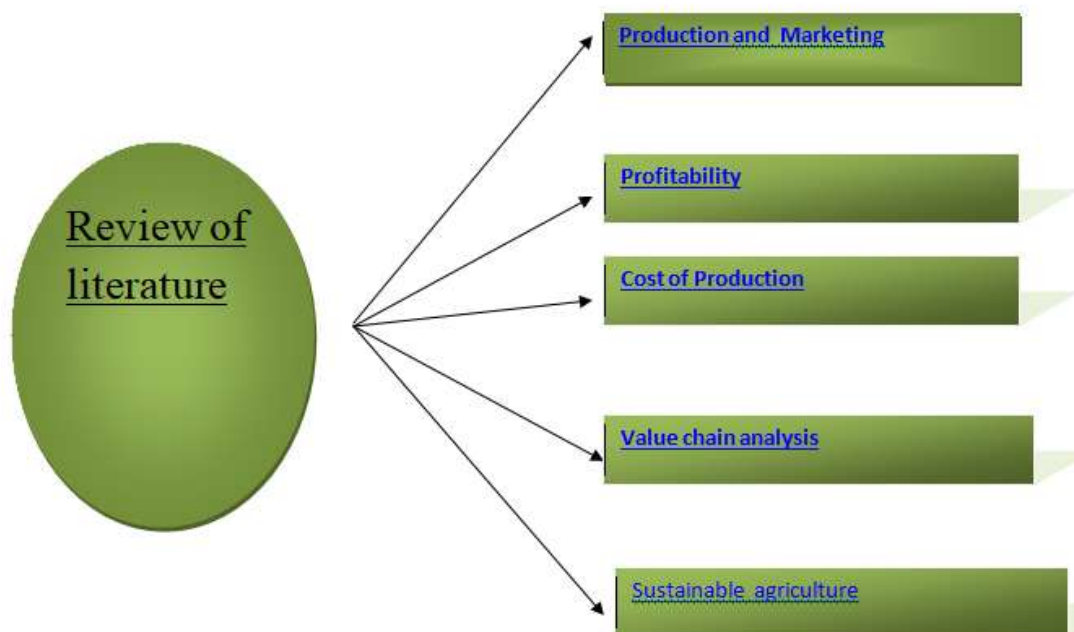
Despite of significant improvement in farm credit, various subsidies and extension programmes, farmers in India are struggling hard to sustain agriculture. The drought relief measures, loan waiver schemes and even the crop insurance schemes have not helped farmers make profitable agriculture. The enhanced Minimum Support Price (MSP) also does not seem to help farmers as there are problems in its realisation.

The only solution to farmers’ agony is to make them self reliant, acquire access to proper market and create value addition to their produce. To make this possible it is necessary to understand and examine the hurdles in the production, processing and marketing of agriculture produce, which we assume will help in making value chain analysis for selected crops and help in knowing the preference of farmers in selling their produce, whether it is regulated markets, cooperatives or direct sale.

This study proposes to examine three major crops in Gadag district.

**REVIEW OF LITERATURE: (2003-2018)**

**Themes of Review of Literature**



**PRODUCTION AND MARKETING**

- 1) Indrasen Patidar (2004) : studied the production and marketing of chilly in Khargone District Of Madya Pradesh .
- 2) R, Thejeawini (2005) : studied the production and marketing of Acid lime in Vijayapura district of Karnataka with an objectives of cost and returns.
- 3) Visawadia H,.R et al (2006) : studied the comparative analysis of production and marketing of Bt cotton and Hybrid cotton in Saurashtra region of Gujarat State .
- 4) Ramachandra, V.A. (2006) : studied the production and marketing of Sapota in Belgaum and Dharwad of North Karnataka with an objectives of area, production and productivity.
- 5) K. Shivashankar (2007): studied marketing of dry chillies in Karnataka. Dry chilly is one of the important domestically consumed and exporting commodities in our nation. This study was conducted in Dharwad and Haveri districts of Karnataka.
- 6) Srinivas M,.N (2007) : studied the production and marketing of kolar milk union -karnataka state with an objectives of cost and returns.
- 7) Farinde, A.J., Owolarafe, O.K and Ogungbemi,O.I. (2007) : studied the production and marketing of okra in Egbedore local Govt area of Osun state of Nigeria with an objectives of area, production and productivity.
- 8) Kempa Reddy, R. (2008) : studied the production and marketing of Tomato in Kolar,

- Bangalore and Tumkur districts of Karnataka with an objectives of cost and returns.
- 9) Balasubramaniam, M, and Aliyar, M (2009) : studied the production and marketing of groundnut in Dindigul district of TamilNadu.
  - 10) Sarode S.C. (2009) : studied the marketing of Banana in Raver and Chopda sub regions in Jalgaon district of Maharashtra.
  - 11) M.R. Patil, M.K.Borse And Sunil D, Patil (2009) : studied the production and marketing of turmeric in Miraj and Walava tahsils of sangli district in western Maharashtra with an objectives of cost and returns.
  - 12) Sanjay Kumar ( 2009) : studied the economic analysis of production and marketing of Litchi in Muzaffarpur district of Bihar with an objectives of cost and returns.
  - 13) Manju Uikey (2009) : studied the production and marketing of cauliflower in Indore district of Madhya Pradesh with an objectives of cost and returns.
  - 14) Geta and Kifle (2011) : studied the production and marketing of Ginger in Southern Ethiopia with an objectives of area, cost and returns.

#### **Profitability:**

Channappa et al ( 2003) examined profitability of Hybrid rice cultivation in Mandya and Mysore districts of Karnataka.

#### **Cost of Cultivation:**

- 1) Abdal et al ( 2009) examined the cost of cultivation of tomato in Kuwait with an objective to look into value of crop production, quality of crop production, and area.
- 2) Ramappa and Manjunath (2013) examined cost cultivation of Areca nut non traditional region of Karnataka.
- 3) Pushpa et al ( 2017) examined Cost of cultivation and economic returns from major crops in the eastern region of Uttar- Pradesh.
- 4) Hatai (2018) examined cost of cultivation and economic returns analysis of Cashew nut. The study was conducted in Selsella and Dadenggiri CD blocks of West Garo Hills districts of Meghalaya.

#### **Value Chain Analysis:**

- 1) The present study was conducted in Kadur and Tarikere clusters of Chikmagalur.
- 2) Ganapathy et al (2014): examined the value chain of black pepper and looked into its area, production and productivity.
- 3) Hailegiorgis( 2017) : examined cost analysis, profit margin, and problems in the production of onion.
- 4) Ramappa and Manjunath (2017): examined tomato value chain in Karnataka with the objectives of estimating the marketing cost, marketing efficiency, and value addition.

- 5) Markowitz (2018): examined value chain analysis for sunflower in Malawi looking into challenges and opportunities in its cultivation.

#### **Sustainable Agriculture:**

Seth and Buckley (2015) : examined sustainable agriculture in China.

The study looked into Chinese agriculture practiced without chemical fertilizers or pesticides.

#### **Theoretical Background and Conceptual Framework:**

##### **Cobb-Douglas Production Function:**

The Cobb-Douglas production function is based on the empirical study of the American manufacturing industry made by Paul H. Douglas and C.W. Cobb.

This production function is described the technical relationship between amount of input and amount of output.

It is a linear homogeneous production function of degree one which takes into account two inputs, labour and capital, for the entire output of the manufacturing industry.

**The Cobb-Douglas production function is expressed as:**

$$Q = AL^{\alpha} K^{\beta}$$

Where

- Q represent the quantity of output
- L stands for the quantity of capital input
- K stands for the quantity of capital inputs
- A is a constant representing total factor productivity or technology
- $\alpha$  and  $\beta$  are constraints representing the output elasticities of labor and capital, respectively , and they sum to 1 ( $\alpha + \beta = 1$ ).

This production function is based on linear homogeneous production function.

#### **Constant returns to scale:**

When a firm change their input it will occur exactly same change in amount of output.

This can be explaining with the help of following diagram.

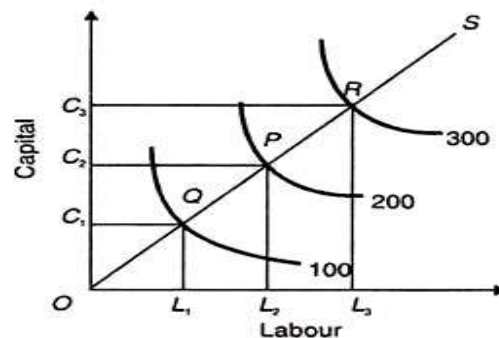


Fig. 20

Which shows constant returns to scale because the total of the values of L and C is equal to one:  $(\frac{3}{4} + \frac{1}{4})$ , i.e.,  $(a + \beta = 1)$ . The coefficient of labourer in the C-D function measures the percentage increase in Q that would result from a 1 per cent increase in L, while holding C as constant.

Similarly, B is the percentage increase in Q that would result from a 1 per cent increase in C, while holding L as constant.

The C-D production function showing constant returns to scale is depicted in Figure 20. Labour input is taken on the horizontal axis and capital on the vertical axis.

To produce 100 units of output, OC, units of capital and OL units of labour are used. If the output were to be doubled to 200, the inputs of labour and capital would have to be doubled. OC is exactly double of OC<sub>1</sub> and of OL<sub>2</sub> is double of OL<sub>1</sub>.

Similarly, if the output is to be raised three-fold to 300, the units of labour and capital will have to be increased three-fold. OC<sub>3</sub> and OL<sub>3</sub> are three times larger than OC<sub>1</sub>, and OL<sub>1</sub>, respectively. Another method is to take the scale line or expansion path connecting the equilibrium points Q, P and R. OS is the scale line or expansion path joining these points.

#### Research Issues:

1. Why farmers grow Green gram and Onion?
2. What is the cost of cultivation and returns for Green gram and onion?
3. Where do farmers sell these two agriculture produce and why?
4. What are the hurdles if any in marketing of these two crops?
5. Are farmers aware of e-portals?
6. Do they have access to e-portals?

#### Research Gap:

The literature and research review suggests that most of the studies have focused on the various inputs.

And most of the studies have focused on production, cost of production, and awareness of profit and loss conditions. But there is lack of studies covering transportation cost, lack of market awareness.

#### Objectives of the Study:

- 1) To analyse Production, processing and Marketing of agriculture products in Karnataka with specific reference to selected crops.
- 2) To perform value chain analysis for selected crops in Gadag district.
- 3) To identify hurdles in the production and marketing of select agriculture Products in Gadag district.
- 4) To assess the preferences of farmers for marketing of agriculture products in Gadag district.

#### Hypothesis of the Study:

- 1) More the number of Middlemen lower the share of Profits to the Farmers in sale of agriculture products.
- 2) Lack of transportation, storage, and fault in weighing are negatively affect the sale
- 3) of crops.

#### RESEARCH METHODOLOGY

The present chapter deals with the aspects of the present study. As matter of convenience, in the present study the methodology has broadly been discussed under following heads:

- 1) Sampling design
- 2) Choice of the area
- 3) Selection of villages
- 4) Sample frame work of the study
- 5) Selection of respondents of farmers
- 6) Type of data collection
- 7) Methods of data collection
- 8) Period of data collection
- 9) Data analysis and interpretation.



S.NO	TALUKAS	NO OF SAMPLE VILLAGES	TOTAL SAMPLE FARMERS
01	GADAG	1.Hombal	30
		2.Kotumachagi	30
02	MUNDARAGI	1. Dambal	30
		2.Hallikery	30
03	NARAGUND	1.Chikkanaragund	30
		2. Yawagal	30
04	RON	1. Abbigery	30
		2. Jakkali	30
05	SHIRAHATTI	1.Shirahatti	30
		2.shigli	30
	Total	10	300

### Sampling Design

This is an empirical research based on survey method. The present study is confined to Gadag District keeping in view that this district ranks first in area of onion cultivation with an area of 39289 hectares and green gram cultivation with an area of 55211 hectares. Then a Multi-Staged random sampling has been adopted for the study.

#### Choice of the Area:

The study covers the district of Gadag consisting five talukas viz., Gadag, Mundaragi, Naragund, Ron and Shirahatti. The total area has dry climate and has vast stretch of black and red soil . It is suitable for growing Onion and green gram wheat and cotton. Onion and green gram is grown significantly in the area and hence the choices of the district for the research study.

#### Selection of Villages:

In the third stage, the district has mainly five talukas and 337 villages. Out of 337 villages we have selected 10 villages. In each talukas we have selected two villages and 30 respondents were selected on the basis of maximum number of Onion and green gram growers.

#### Selection of Respondents Farmers:

For the fourth stage of selection , a total number of 300 respondent farmers growing Onion and Green gram have been chosen for a significant study of the production and marketing of vegetables and food grains with special reference to onion and green gram. Taluka wise the study covers 60 farmers in each taluka for personal interview for collection of the data. The 30 farmers include 10 large farmers, 10 medium farmers and 10 and 10 marginal farmers to give proper representation to the three groups of respondents in each taluka.

The total farmers and their location is selected on the basis of random sampling by taking into account the area under vegetables and food grains in general and onion and green gram particular.

### SAMPLE FRAM WORK OF THE STUDY

#### Type of Data Collection:

The present study is based on primary and secondary data. Primary data is collected from 300 respondents farmers they growing onion and green gram in the 5 talukas of the Gadag district. The data is collected as per structured questionnaire on production and marketing basis.

The secondary data is collected from the published sources from the government and other institutions such as APMCs, Dept of Agriculture, Dept of Statistics, Dept of Horticulture and websites.

#### Methods of Data Collection:

The primary data is collected through as per the pretested and structural questionnaire administered to the 300 respondents. The questionnaire for the farmer – respondents consist of two sections – the first relating to questions on different aspects of production of onion and green gram preferences on where do they sell, how and what do they do to get right prices.

The second part related to different aspect of marketing of onion and green gram viz., assembling, grading, packing, storage, weighing, how do they channelize their produce, how do they mitigate risks and farmers' awareness and access to latest technologies

### Period of Data Collection:

The data collection was for a period of 10 years from 2010-11 to 2019-20 for purpose of analysis and interpretation of data. The ten year period was considered immense to study the trends of production, price and other related aspects of onion and green gram production and marketing in the study area.

**Data Analysis and Interpretation:** The data collected from the primary and secondary sources are presented in accurate planned statistical tables and wherever contingent graphical representation are made through graphs and charts. The data is explained through statistical tools by using simple techniques like percentage ratio and averages. Well-turned conclusions and decisions are derived from the statistical tables thus prepared from data collection.

### Limitations of the Study:

- The study focuses on **Production and Marketing**.
- Covers only **Gadag** district in South Karnataka.
- Covers only those farmers who have production of Onion and Green Gram in the study area.

## MAJOR FINDINGS & SUGGESTIONS

### Socio-economic Background of the Respondents

- ✓ It is seen that out of the total farmers, only 6.5% households were in the age group below 35 years, 55.0% of sample farmers were in the age group of 35 to 50 years, 24.00% households were in the age group of 50 to 65 years and 11.5% households above 65 years.
- ✓ It is found that out of the total number of beneficiaries, 64.00% of them belongs to GM community, followed by OBC 29.00%, ST 2.00%, and SC 5.0%. Thus, it reflects the fact that the Lingayat community has a significant share in farming occupation.
- ✓ It is found that out of the total families, 14.5% of households fall under the category of joint family and 85.5% of households fall under the category of nuclear family. Thus, out of total families sampled, majority of households belong to the nuclear family category. Thus, it reveals the fact, that in rural area, joint family is being replaced by nuclear family.
- ✓ The drop out ratio of total students, who are enrolled in primary school shows that only 2.6% continue their education upto post-graduate level. Families completing their education at higher secondary, graduate, postgraduate and diploma are at 15.5%, 6.6%, 2.5% and 2.9%, respectively.
- ✓ Considering the ownership of consumer durable goods and vehicles; the standard of living of the farmers in micro-irrigation system irrigated region is significantly better than the farmers in non micro-irrigation system irrigated region.

### Suggestions:

- ✓ Irrigation facilities should be used in order to boost the use of newer and more advanced technology in agriculture sector. Moreover, farmers should be trained to use scientific methods of irrigation such as drip and sprinkler irrigation to utilize scarce water resources.
- ✓ In order to accomplish, full efficiency levels in the implementation of micro irrigation system and to ensure adequate returns on investment on costly inputs, scientific management of soil and water resources is essential. In this regard, various soil testing facilities should be established in parts other than major cash crops like sunflower, sugarcane etc.,
- ✓ Most of the micro irrigation farmers opined that government maintains the agriculture ponds as it solves the water scarcity.
- ✓ In micro irrigation system irrigated areas, sometime drip or sprinkler equipments knowing or unknowingly damaged due to some reasons. Should be properly repaired immediately so as to stop the seepage and percolation of water.

## REFERENCES

- [1]. Channappa et al (2003): "Profitability of Hybrid Rice cultivation : Evidence from Karnataka", Economic and Political weekly, Jan 21-23, 2003, Vol,38,(25): PP, 2531-2534. (<https://www.epw.in/journal/2003/25/review-agriculture-review-issues-specials/profitability-hybrid-rice-cultivation.html>) accessed on 06<sup>th</sup> October 2018.
- [2]. Indrasen Patidar (2004) : " Economics of production and marketing of Chilli in Khargone district of Madhya Pradesh", Department of agriculture economics and farm management college of agriculture Indore, Jawaharlal Nehru Krishi Vidyalaya – Jabalpur, college of agriculture – Indore. (<https://krishikosh.egranth.ac.in/handle/1/5810018451?mode=simple>) accessed on 06<sup>th</sup> October 2018.
- [3]. R, Thejeawini (2005): " Production and marketing of Acid lime in Vijayapura district – an economic analysis", Department of agricultural economics, college of agriculture-Bijapur, University of agriculture science-Dharwad. ([https://www.academia.edu/39813051/An\\_economic\\_analysis\\_of\\_acid\\_lime\\_production\\_in\\_Vijayapura\\_district\\_of\\_Karnataka](https://www.academia.edu/39813051/An_economic_analysis_of_acid_lime_production_in_Vijayapura_district_of_Karnataka)) accessed on October 07<sup>th</sup> 2018. (PDF).
- [4]. Visawadia, H.R et al (2006): "A comparative analysis of production and marketing of BT Cotton and Hybrid cotton in Saurashtra Region of Gujarat State", Agricultural Economics Research Review, Vol.19: PP- 293-300.

- (<https://ideas.repec.org/a/ags/aerrae/57765.html>) accessed on 08<sup>th</sup> October 2018.
- [5]. K. Shivashankar (2007) : “Marketing of dry chillies in Karnataka”, Department of Agriculture marketing, co-operation and Agribusiness management college of Agriculture- Dharwad. (<https://docplayer.net/104052135-Marketing-of-dry-chillies-in-karnataka-a-management-appraisal.html>) accessed on 08<sup>th</sup> October 2018.
- [6]. Srinivas M.N. (2007): “ A study on the production and marketing of kolar milk union-Karnataka state”, school of agribusiness management college of agriculture University – Rajendranagar-Hyderabad. (<https://krishikosh.egranth.ac.in/handle/1/71081>) accessed on 20<sup>th</sup> December 2018.
- [7]. Farinde, A.J., Owolarafe, O.K and Ogungbemi, O.I. (2007) : “ An overview of production and marketing of Okra in Egbedore local government, area of Osun state , Nigeria”, Agricultural engineering International : the C.I.G.R. E-journal Manuscript No. 07002, Vol-9. (<http://www.cigrjournal.org/index.php/Ejournal/article/viewFile/959/1119>)
- [8]. Kempa Reddy, R. (2008): “ Production and marketing of Tomato in Karnataka”, Department of agricultural marketing University, University of agricultural science, Bangalore. ([http://www.uasbagrilibindia.org/cgi-bin/koha/opac-detail.pl?biblionumber=134966&query\\_desc=au%3A%22Ramegowda.%20P.V%22](http://www.uasbagrilibindia.org/cgi-bin/koha/opac-detail.pl?biblionumber=134966&query_desc=au%3A%22Ramegowda.%20P.V%22))
- [9]. Balasubramaniam, M and Aliyar, M. (2009): “ A study on the production and marketing of groundnut in Dindigul district of Tamil Nadu”. (<https://shodhganga.inflibnet.ac.in/handle/10603/7760/>) accessed on 20<sup>th</sup> December 2018.
- [10]. Sarode S. C. (2009): “ Economics of banana marketing in Jalgaon district of Maharashtra”, African Journal of Marketing Management, Vol. 1(5): PP – 128-132. (<https://books.google.co.in/books?id=0HMPdWAAQBAJ&pg=PA32&lpg=PA32&dq=Sarode+S.+C.+&hl=en&pg-ll=128-132>) (2009):+%E2%80%9C+Economics+of+banana+marketing+in+Jalgaon++district+of+Maharashtra%E2%80%9D,+African+Journal+of+Marketing+Management,+Vol.+1(5):+PP+%E2%80%93+128-132) accessed on 15<sup>th</sup> June 2020.
- [11]. M.R. Patil, M.K.Borse And Sunil D, Patil (2009): “ Economic aspect of production and marketing of turmeric in western Maharashtra”, International Journal of agriculture science. Vol-5(1): PP- 60-63. (<https://www.cabdirect.org/cabdirect/abstract/20093099112>) accessed on 2<sup>nd</sup> January 2019.
- [12]. Sanjay Kumar ( 2009) : “ Economic analysis of production and marketing of Litchi in Bihar” , University of agricultural science , Bangalore. (<https://krishikosh.egranth.ac.in/handle/1/5810023682>) .
- [13]. Manju Uikey (2009): “ Production and marketing of Cauliflower in Indore district of Madya Pradesh”, Department of agriculture economics and farm management college of agriculture Indore, Jawaharlal Nehru Krishi Vidyalaya – Jabalpur, college of agriculture – Indore. (<https://krishikosh.egranth.ac.in/handle/1/5810023682>) accessed on July 13<sup>th</sup> 2020.