“PROBLEMS AND PROSPECTS OF COFFEE INDUSTRY IN CHIKMAGALORE DISTRICT - (KARNATAKA)”

SYNOPSIS

1. INTRODUCTION

‘Coffee’ is the name of a tree, its fruits, seeds (known botanically as the ‘genus Coffee’) and the raw product produced from them, and is also the name of the roasted product when the green Coffee beans are processed. “Coffee” is also the name of the beverage in the cup for consumption.

DEFINITION OF COFFEE INDUSTRY Although coffee was known to the Yemenis and Ethiopian Natives of the Eastern Africa almost 1,000 years ago, it began its world wide spread only in the 16 century A.D. Today, there is hardly any place in the world where coffee is not consumed. During the course, it has spawned a comprehensive agro-industrial activity known as the coffee industry that includes cultivation of the coffee crop, curing and processing of coffee beans, manufacture, marketing and exports of coffee verities as well as research and development work in all its aspects.

A middle -eastern migrant Muslim saint Baba BUDAN had introduces coffee seeds of Arabica variety to Chikmagalore district as early in 1600A.D.,but for the next 100 years or so, the plant remained just an ornamental flowering plant in the backyards. Commercial cultivation of the coffee began only in 1734 in Malbar region of Kerala and in 1807, the first exports of processed coffee were made to England by Parry & Company. In 1906 , Robusta a Javanese variety of coffee, was introduced into India by Dutch. Since then, commercial coffee production industry has not looked back. Today, among the horticulture products exports out of India, after tea (27.52%) , Coffee commands the second largest share of 22.13%. Globally, coffee is the second largest dollar-traded product after petroleum.

Coffee industry has a multiplier effect on other industries-fertilizers, pesticides, irrigation and farming equipment, laboratory equipment, Hessian and jute bags, polyethylene bags and sheets, tinfoil, coal and coke, chemicals, paper and printing, power generation and associated industrial activities.

Within the preview of this work, Coffee industry signifies only the cultivation and selling activities of the coffee growers in a limited geographical area of Chikmagalore district of Karnataka State. It is obvious that it is beyond the capacity of a single researcher to investigate the coffee industry, as a whole.
2. **Coffee in India**

Nature has blessed India with diverse agro-climatic conditions that are conducive for growing different crops almost round the year. Indian agriculture contributes nearly 40% of the gross domestic product and provides employment to around two-thirds of the nation’s population. India is the second largest producer of coffee, next to Brazil, and brings in nearly Rs.2,000/- crores of foreign exchange to the nation every year. The major coffee growing States in India are Karnataka, Kerala, Tamil Nadu and Andhra Pradesh. It is also grown on a small scale in States like Arunachal Pradesh, Sikkim, Tripura and West Bengal.

Coffee is a commercial crop and is grown by plantation method. *Arabica* and *Robusta* are the two types of coffee cultivated on commercial scale. According to a survey conducted by the Karnataka Coffee Board in the year 2001-02, the area under coffee plantation in Karnataka is around 3,40,306 hectares (ha.), of which, Arabica accounts for 40.50% and the Robusta for 50.50%. The average annual coffee production is about 25,000 tonnes, out of which, about 70% production is exported annually. The coffee area is distributed in a total of 1,40,294 holdings, of which only 2,650 belong to large growers owning above 10 acres.

Coffee is an agro-based rural industry. It plays an important role in the development of our country. It brings nearly Rs.2,000/- of foreign exchange to the nation every year. It provides direct and indirect employment to above 6 lakh people.

According to a legend, a Muslim pilgrim, Baba Budan, introduced Arabica coffee into India sometime during 1600 A.D. He is reported to have brought just seven seeds of coffee from Yemen, presumably the Mokka coffee region, and raised the seedlings at his hermitage on the hills near Chikmagalur city of Karnataka State. The Province of Kaffa in Ethiopia is considered the original habitat of Arabica coffee.

In Chikmagalur district, a Britisher Thomas Canan established the earliest large scale coffee plantation in 1830. It is still in good condition.

The soil and climatic conditions in Chikmagalur district are best suited for coffee production. Most hilly lands with forest soils in South India fulfill these requirements. Geographic parameters like elevation aspects and environmental factors like rainfall, temperature and atmospheric humidity can influence an economic production of coffee than soil factors.

3. **Statement of the Problem**

India’s coffee plays an important role in the international coffee market. India has achieved a commendable success in coffee production and export for a long period. The State of Karnataka is famous for coffee production and exports. Chikamagalur, Coorg and Hasan districts are the main coffee growing districts in Karnataka.
For the present work, the researcher has decided to study the problems and prospects of the coffee industry in Chikmagalure district. In a liberalized economy, globalization and privatization play a very important role in coffee production and exports. In the coffee industry, mainly the coffee growers are facing various problems. Low yield per acre, low quantity of coffee production, inadequate storage and transportation facilities and labour are the major problems being faced by these growers at the production stage.

Fluctuating prices, lack of market information, lack of efficient management, malpractices at the market place are the other problems faced by these growers at the marketing stage.

Taking into account the abovementioned various problems of the coffee industry, the researcher has decided to make a separate and an in-depth study of the problems and prospects of the coffee industry, especially in Chikmagalure district.

4. **Objectives of the Study**

In view of the above discussions, the following have been set out as the objectives of the present study:

1. To study the problems of coffee growers in the study area;
2. To study various financial problems of coffee growers in the study area;
3. To provide practical suggestions to overcome the problems identified.

5. **Methodology Adopted**

In view of the above objectives, the present research work has relied on both the primary and the secondary data, compiled from the coffee growers, Government institutions, archives of the Coffee Board of India, as well as various books, journals and periodicals.

In the present study, emphasis has been given on collecting the primary data by survey method. The primary data collected from the respondent-coffee growers was processed on a computer by developing specific softwares and under expert supervision. The statistical findings derived from this exercise, juxtaposed against the theoretical background and secondary data, were interpreted through an intellectual exercise for the purpose of drawing conclusions. Similarly, specific computer softwares were used for word-processing.

6. **Selection of Study Area - Chikamagalore District and Talukas**

Geographical area-wise, Chikamagalore is the largest district in Karnakata and has a substantial population of coffee growers. It was thus thought appropriate to select this district as representative of all the coffee growing districts in Karnataka.

Furthermore, Chikamagalore district has seven talukas and although
coffee is grown in all the talukas, there is a substantial production of coffee in Koppa, N.R.Pra, Chikmagalore and Mudigere, while the production in the remaining three talukas of Tarikere, Kadur and Srin geri is lower because of poor environment and soil conditions. Hence, only the high-yielding talukas have been taken into consideration.

7. **Sample Size**

   Purposive sampling method was used for collecting the primary data. Accordingly, 50 each Arabica and Robusta coffee growers were taken up as sample.

   In the sample, equal weightage was given to both types of coffees, i.e. Arabica and Robusta.

8. **Collection of Data**

   For collecting accurate and reliable primary data, the respondent-coffee growers were administered a detailed structured interview schedule. Also, the heads of various Coffee Curing Works in the study area were informally interviewed to know the details of the curing process and also to know their problems.

   The secondary data regarding the Government’s policies towards coffee industry, and coffee export promotion policies, and the roles of the Coffee Board of India and other concerned agencies was collected from the respective sources.

9. **Data Analysis and Interpretation**

   The primary data collected from the respondent-coffee growers was processed on a computer by developing specific software and under expert supervision. The statistical findings derived from this exercise, juxtaposed against the theoretical background, were interpreted through an intellectual exercise for the purpose of drawing conclusions. Similarly, specific computer software were used for word-processing.

10. **Scope of the Study**

    The present work is an *exploratory investigation* into the problems and prospects of the coffee industry. The scope of the study is limited with reference to following :-

    **Geographical Scope**

    The *geographical scope* is confined to the boundaries of Chikmagalure district of Karnataka State. The coffee growers of the same district were considered as a respondent for the study.

    **Topical Scope**

    The researcher has selected the topic for the study relating to problems and prospects of coffee industry and topical scope also covers the evaluation of the problems and prospects of the coffee industry in the study area.
ANALYTICAL SCOPE

The analytical scope of the present study is limited to the fulfillment of the objectives set out for the study. The present study has focused on the problems and prospects of coffee industry of Chikmagalore district with objective to understand problems faced and satisfaction level of coffee growers.

FUNCTIONAL SCOPE

The functional scope is confined to offering a set of meaningful suggestions for resolving the problems being faced by the coffee industry in Chikmagalore district, in particular.

11. SIGNIFICANCE AND NEED OF THE STUDY

India is an agrarian country. It produces many types of crops for exports and domestic consumption. There is a considerable scope for increasing the exports and production of commercial crops. Hence, India should take advantage of this by strengthening its production and post-production processing facilities.

There is a need to make a separate study of problems of coffee production. Karnataka is growing the major part of the total production of coffee in India, but still it is not in a position to obtain good crop yields and finished quantities. Hence, the researcher feels that it is necessary to undertake a study of problems and prospects of the coffee industry, at least in a limited area of one geographical district - Chikamagalore.

The study will prove to be unique not only for Chikamagalore district, but also for other coffee growing areas in Karnataka State. Its findings and suggestions will also prove useful to coffee growers, research workers, export houses as well as State and Central Governments.

Under the new policy of globalization and liberalization, a study of the problems and prospects of the coffee industry will become a pathfinder for new and existing growers, exporters and policymakers.

12. CHAPTER SCHEME

The Thesis is divided into Six Chapters as under:

Chapter-1 : Introduction and Research Design
Chapter-2 : Review of Literature
Chaper-3 : Coffee : A Brief History and Contemporary Scenario
Chaper-4 : Profile of Chikmagalore District
Chapter-5 : Data Analysis and Interpretation
Chapter-6 : Conclusions and Suggestions

Questionnaire
Bibliography

The structured interview schedule used for collecting the primary data forms the Appendix and a Select Bibliography concludes the Thesis.

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13. **MAJOR CONCLUSIONS**

The conclusions of this research work are mainly based on the analysis and interpretation of the primary data collected through a structured interview schedule, from a sample of 100 coffee grower-respondents - 50 each growers of Arabica and Robusta coffee varieties, from Chikmagalure District of Karnataka State.

13.1 **Personal and Family Information**

The representative coffee grower in Chikmagalure district is between 36 to 60 years old, mostly senior aged among Arabica growers (42%) and younger aged among Robusta growers (62%).

He is educated either between upto 7th and 10th standard or upto degree and graduation. Around one-fifth (20-22%) of both Arabica and Robusta growers are graduates.

He mostly belongs to advanced castes in the Hindu community and has Kannada as his mother tongue. He mostly belongs to a nuclear family comprising only upto 4 members. Interestingly, more than half (52%) growers have a coffee plantation-trained person in the family. More than four-fifths (84%) growers’ families have only one family member wholly engaged in coffee farming, the remaining 16% families have two or more such persons.

The main source of his family income is his coffee plantation, providing him an annual family income between Rs.25,000 to above Rs.2.0 lakh - around one-third (36%) Arabica growers’ income is between Rs.1.0 to 2.0 lakh, while around one-third (36%) Robusta growers’ income is between Rs.0.25 to 0.50 lakh.

13.2 **Agricultural Information**

The representative coffee grower in Chikmagalure district has raised his coffee plantation on the ancestral land, admeasuring below 2.5 acres (marginal - 24%), 2.51 to 5 acres (small - 22%) to 5.01 to 10 acres (medium - 37%). There also are some big land holders among both the Arabica (18%) and Robusta (16%) growers. Some of the growers are cultivating coffee on the tenancy land (6%), while 15% growers have recently cash purchased their lands/plantation. Light lateritic is the type of soil in all the plantations, because it highly suits coffee crop. All the plantations grow only coffee as the primary crop, but 82% growers also take foodgrains and some growers also take green vegetables and fruits (mostly for home consumption) as the secondary crops.

Rainfall is the only source of water for majority (93%) of coffee plantations. While all the Arabica growers are entirely dependent on the rainfall, one-fifth (20%)each Robusta growers also use well water and the water lifted from river/canal. Only about 32% plantations have sufficient availability of water, while nearly two-thirds (65%) plantations survive on insufficient water, i.e. all the (100%) Arabica and 30% Robusta. As such, all the plantations begin their cropping season with the onset of monsoon.
More than half (57%) plantations do not own a diesel/electric pumpset. Only two-fifths (39%) plantations own a tractor and trailer and only about one-half plantations own modern farm equipment like power tiller/ridger, etc. While 86% coffee growers have not undertaken any agro-ancillary activity, the remaining 14% growers, depending on the availability of spareable manpower, have undertaken such activities as milk production, floriculture/horticulture and poultry-keeping.

13.3 Coffee Plantation Information

Among the individual coffee growers, the area under coffee plantation varies from below 2.5 acres to above 10.1 acres; around one-third (35%) plantations are of medium size (5-10 acres) and around one-fifth (17%) are of big size (above 10.1 acres). Around one-third (37%) plantations are standing on irrigated land - 24% Arabica and 50% Robusta; the rest have been raised on rainfed land. Being standing on sloping rainfed lands, majority (89%) plantations use the natural gradient to manage the water flows, but around one-fifth (18%) of Robusta plantations also have installed modern water management systems like sprinkler and drip irrigation. At the same time, nearly two-thirds (64%) plantations suffer from insufficiency of irrigation water, while the remaining 36% plantations have it available in sufficient to abundant quantities.

Majority (82%) coffee growers use improved plantation techniques, but 18% are still clinging to the traditional techniques. For the adopters of the modern techniques, Coffee Board’s publications and discussions with its officials/experts is one of the major sources of information (88%), followed by the State Government’s village-level agricultural extension workers (55%) and agricultural journals (20%). Among the assorted information sources are television (9%), circle agricultural officer (7%), radio programmes (4%), newspapers/periodicals and State agriculture department (2% each).

An overwhelming majority (90%) of the growers use both organic and chemical fertilizers on their plantations, depending on the need and suitability.

Nearly half (45%) the plantations, being of substantial size, use a hired tractor for prior and intercultural operations, another one-third (39%) use their own tractor, and the remaining (16%) use bulls. Also, nearly one-third (35%) plantations give out the prior and intercultural operations work on contract basis, about one-fourth (28%) plantations use family members plus hired labour for the purpose, but about one-fifth plantations use family members only (19%) and the remaining use hired labour only (18%). The practice of giving it out as contract work is more prevalent among Arabica growers, while that of using family members and hired labour is more prevalent among Robusta growers.

While more than half (54%) the plantations avail bank loans as a major source of working funds, around one-fourth (26%) use only family funds and the remaining 29% use credit cooperative loans. The tendency to use bank loans is more marked among the Arabica growers, while the Robusta growers use all the
three sources nearly equally.

An overwhelming majority of 93% growers take intercrops in their plantations - pepper (65%), oranges (62%) and banana (32%) being the more popular ones, but there is a sprinkling of ginger (4%) and cardamom, pineapple and vanilla (1%) each also. Pepper is more popular with Arabica growers, while oranges and bananas are more popular with Robusta growers. All the plantations use a mix of wild trees and silver oak trees for obtaining shed in the plantation.

More than half (56%) the growers harvest their coffee by wet method (for preparing parchment coffee) and only 44% growers use dry method (for preparing cherry coffee). The wet method is used by 86% Arabica growers, while 74% growers use dry method. More than half (54%) the growers undertake pre-despatch processes like sorting and grading, the remaining 46% growers leave this job to the curers. Nearly three-fourths (72%) Arabica growers and nearly two-thirds (64%) Robusta growers undertake such pre-despatch processes. Also, around two-thirds (63%) growers store the harvested produce in their own godown, but the remaining 37% growers take resort to rented godowns. Around two-thirds (69%) growers store the produce for less than 2 weeks before offering it for sale; among the rest, the storage period varies between 2-4 weeks to more than 2 months. Majority (55%) growers use hired vehicles for transporting the produce to the purchasers, where in about three-fourths (72%) instances, the produce is graded by the purchaser himself prior to sale and only in 13% instances, machine-grading is carried out.

More than half (52%) the growers receive advance payment from the purchasers against sales, the remaining half (48%) the growers are not interested in such an advance. Of course, the advance-takers have to pay interest on it until the conclusion of sale -71% growers paying it at the rate of 15% p.a. and the remaining 29% paying it at the rate of 18% p.a. Sixty percent growers receive the payment of sale proceeds as an immediate single payment, the remaining 40%, especially those selling large quantities, receive it in 2 to 3 instalments.

Lastly, slightly more than half (57%) the growers are only mildly satisfied with the cash realization of their coffee produce, 21% are highly satisfied, 11% each are neither satisfied nor dissatisfied, but another 11% are mildly dissatisfied.

14. Major Suggestions

Against the background of the above inferences, personal discussions with coffee growers, curers and processors and the review of literature presented earlier, the following may be stated as the problems in coffee cultivation.
14.1 Production and Productivity Problems

- Lack of, and limited access to, improved coffee varieties (resistant to diseases and insects, with high yields and good quality and taste characteristics)
- Inadequate conservation and use of germplasm materials (collection, storage, evaluation, exchange and patent problems)
- Inadequate recommendations and technologies for pest or disease control Lack of appropriate and sustainable socio-agronomic practices and technologies
- Ageing coffee trees, plantations and farmers
- Inadequate technology packages for soil fertility management
- Unstable climatic conditions, civil wars, political disruptions and corrupt administrative structures (lack of accountability and transparency).

14.2 Processing and Quality Problems

- Poor technology for post-harvest processing (drying, pulping, hulling, storage), including pest and disease prevention (OTA contamination, berry borers)
- Poor regulatory frameworks and administrative structures for exports, lack of incentives for good marketable coffee
- Inadequate equipment for coffee processing, leading to high processing costs
- Lack of magazines and newsletters to spread information about new quality-improvement technologies:

14.3 Marketing and Government Policies Problems:

- Unfavourable effects of privatization, liberalization and global, free trade, together with indebtedness to World Bank/international Monetary Fund (IMF) and other banks
- Persistently low prices on international markets (Robusta versus Arabica)
- Inadequate promotion of domestic and local consumption, which could reduce surpluses by 25% to 30% (packaging, grinding, labelling, selling, blending)
- Lack of diversification into niche markets, e.g. organic, speciality and gourmet coffees
- Inadequate marketing strategy at local and international levels
- Mismanagement of limited funds and poor access to micro-funding.

14.4 Socio-economic Constraints or Problems

- High production costs compared to those in Asia (Vietnam)
- Lack of access by farmers to agricultural inputs and credit
- Poor land use policies and tenure systems
• Poor level of adoption of new technologies for production
• Gender inequalities in coffee production programmes and systems
• Poor infrastructure development and lack of basic socio-economic services.

14.5 Cross-cutting Constraints or Problems
• Lack of effective links between extension and farmers, due to poor facilitation
• Inadequate training programmes (workshops, seminars, field days, exchange visits, scientific conferences) for farmers, scientists and other stakeholders
• Inadequately funded coffee research programmes and projects, and poorly paid scientists, due to lack of cess fees or special government allocations
• Weak links, networking and collaboration with international research institutions, regional organizations, donors and universities
• Inadequate production and exchange of information and technologies by and among member countries, institutions and stakeholders.

14.6 Suggestions to improve Coffee’s Prospects

Under these circumstances, the following measures would indeed help to enhance the Coffee’s prospects:

A. Production and Productivity
• Development of a framework for the production and exchange of coffee planting materials (seeds and cuttings)
• Development of germplasm projects (collection, conservation, evaluation and exchange)
• Studies in (or applied research to develop) up-to-date pest and disease control measures, IPM packages, etc
• Coffee rehabilitation to rejuvenate plantations for increased productivity
• Development of varieties resistant to climatic hazards and pests and diseases, with good quality characteristics
• Studies of N-fixing Rhizobium strains for use in legume by coffee associations
• Information and technology packages on fertilizer and manure use in coffee cropping systems.

B. Processing and Quality
• Improved technology for post-harvest systems (pulping, drying, hulling, storage, transportation and handling), including technology to protect against storage pests and diseases
• Surveys of coffee quality characteristics at farm-gate level in IACO member countries
• Surveys of coffee processing, storage, transportation, packaging and handling systems
• Studies on how to reduce costs in post-harvest processing
• Preliminary studies on environmental degradation (pollution of water by pulping) and enhancement (use of coffee husks and pulps for manure and as a source of energy)
• Applied research on biotechnology, including genomics and genetic modification, to improve coffee quality for world markets.

C. Marketing and Government Policies
• Studies on causes of low world market prices, including price differentials between Arabica and Robusta coffees and their implications
• Studies on unfavourable impacts of privatization, liberalization and global free trade on national coffee sectors in India
• Surveys and studies at regional level to identify the key determinants of increased domestic coffee consumption in India
• Preliminary studies on how to establish organic, speciality and gourmet coffees for niche markets.

D. Socio-economic Constraints
• Studies on how to reduce production costs in India
• Studies on appropriate land tenure systems for coffee production
• Scoping studies on technology adoption and the empowerment of women in coffee production systems.
14.7 Specific Suggestions

1. The Coffee Board must come to purchase coffee directly from the growers.
2. The Coffee Board should give finance to the producers as usual in last decades.
3. Production pattern should be scientifically organized and the Government should take demonstrations and seminars in each Panchayath level.
4. The Government should supply directly to Coffee producers the Fertilizers and payment due on this should be deducted at the time of purchase of coffee.
5. After soil testing, suitable variety of plants be suggested by the Coffee Research Stations (which is being done very effectively in Balehonnur).
6. The Government should fix the prices, or otherwise should declare the support price in advance.
7. Proper training should be given to growers regarding production, because they are found to follow the techniques used by large coffee cultivators.
8. Proper transportation and labour facilities should be provided.
9. Proper storage or warehousing facilities be provided to the coffee growers by the Government.
10. Indian Coffee varieties be standardized and be advertised in the international markets.
11. Coffee should be made in a way so as to compete with other soft drinks.
12. Coffee export procedures be simplified as much as possible.

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December , 2009