CHAPTER I

INTRODUCTION
CHAPTER-I
INTRODUCTION

1.0. ORIGIN OF RESEARCH PROBLEM

Arunachal Pradesh the land of rising sun rest in the laps of the mother Himalaya characterized by snow capped mountain, humming young and fresh rivers, rivulets and beautiful valleys. It enjoys a special climate that open up great potentials for horticulture and agriculture. Infact, it provides favourable climate for undertaking horticulture and cultivation of different spices in the state. Ginger is one of the important spices products of Arunachal Pradesh. Scientifically it is called *Zingiber officinale* belonging to the family *Zingiberaceae*. The rhizome or rootstalk of this spice is used as spice and medicine. It is one of the most known emerging cash crops with high business and marketing potentiality that has been under cultivation since time immemorial in Arunachal Pradesh. However, it is interesting to know that at the beginning it was used as local spice and was considered as an inevitable object for performing cultural rituals. It has been widely used in different cultural and social occasions like marriage ceremony, festival, offering and sacrifice to God and other spirit. However, its jurisdiction of cultivation was restricted to kitchen garden only. Infact, ginger is deeply rooted in social fabric of the indigenous people of this young state. It was only from the year 1990 onwards the ginger cultivation took a new turn in the state. The large-scale cultivation and thereby commercialization of this spice picked up momentum at first in Lower Dibang valley district and then Lohit districts of the Arunachal Pradesh. Around 60 percent of household undertake ginger cultivation and around 25 percent of dry
productivity determines the economic, social, cultural development of the farmers in particular and society in general. Commercial ginger cultivation has tremendous effect on prominent economic variable like saving, income, investment and consumption in these two districts. It has also far-reaching effects on geographical features as it has reshaped the settlement pattern, immigration rate, sex ratio, population and density of population, urbanization, and pace of environmental degradation of these two districts. Commercial cultivation of ginger has also intensified social development of the districts like digging of irrigational cannels, improvement of drinking water, construction of all-weather road and pakka houses, establishment of Parallel educational institutions under private sector, establishment of private clinic and nursing homes and improvement in public health and hygiene, development in transport and communication etc, in these districts. Infact, undertaking of commercial cultivation of ginger has brought about marked changes in social, economic, cultural, geographical and political development of the study districts.

Thus, the present study has close relevancy to the other disciplines like political science, geography, economic, sociology etc.

1.2. REVIEW OF LITERATURE AND DEVELOPMENT IN THE SUBJECT

Numerous research as well as general studies have been conducted over the years with regard to the ginger cultivation and its corresponding impacts on the socio-economic development in India and across the world. But no study pertaining to the ginger cultivation in Arunachal Pradesh has been conducted so far. An effort has been made to review some of the important works having a great bearing on the present study.
Shrestha, L. in his research paper “Ginger Production”, (1979) made detail study on women's participation in the production of ginger, to determine the effect of this activity on the economic status of women and to compare the economic return of ginger to other crops. He found that ginger has good potential for increasing the incomes of women farmers. He also suggested installation of modern processing plants and warehouses, improvement of methods for drying ginger, elimination of middlemen who control prices, and arrangements for loans to women farmers to increasing ginger production.

Chanda Gurung and Nawraj Gurung in their research paper- “The social and gendered nature of ginger production and commercialization: A case study of the Rai, Lepcha and Brahmin-Chhetri in Sikkim and Kalimpong, West Bengal, India”, (1999) have made an comparative study of Rai, Lepcha and Brahmin-Chhetri in Sikkim and Kalimpong in west Bengal in terms of production, marketing, and commercialization of ginger. Further, they attempted to study social and gender dynamics, the constraints and opportunities of the various social groups regarding their livelihood, their own methods, practices, solutions for disease problems, and strategies for involvement of women in the management and control of ginger production.

Ravinder Sood in his research paper- “Ginger production back on the rails”, (2001) has analyzed ginger cultivation in the Simmer, Sloan, Boalsburg, Mandy and Shimla districts of Himachal Pradesh in terms of area under ginger cultivation and production. Further an attempt is made to explain outbreak of rhizome rot disease since 1985 and its impact on the cultivated area under this crop. Further, his study revealed continual growth of ginger production in the Boalsburg district of Himachal Pradesh during the study period. In addition, average ginger production in
Boalsburg, Mandy and Shimla districts have been found to be 20562 Metric Tonnes.

S.C. Pakrashi and Anita Pakrashi in their book- "Ginger: A Versatile Healing Herb", (2003) have made discussions on folkloric & historical background, traditional uses, medicinal uses, protection measures and types of ginger. In addition, they have also made study on current status, production and distribution, storage, processing and types of commercial ginger. The present book fulfills the long felt need of a comprehensive account on this versatile herb through revealing facts on its applications in Ayurvedic, Unani, Homeopathic and Tribal systems of medicine, home remedies and other uses as well as pharmacological investigations.

R.K Yadav, D.S Yadav, N. Rai, S.K Sanwal and P. Sarma in their research paper titled "Commercial prospects of Ginger Cultivation in North-Eastern Region", (2004 ) made an attempt to explain uses, status, diversities, growing patterns, commercial qualities, major production constraints and future thrusts of ginger in north eastern region. The study has revealed that, the area under ginger in north-eastern region is 33.2 thousands hectare which gives total production of 191 thousand tons at an average yield of 5.8 tons per hectare against the national productivity of 3.5 tons per hectare. Meghalaya is found to be the major producer of ginger in the region, which is also second largest producer in the country with total share of 19.59 percent after Kerala, which contributes 23.08 percent to the total production of the country. It unveiled that, after Meghalaya, Mizoram and Arunachal Pradesh have occupied the second and third place in terms of the production of ginger in the region. However, the productivity is found highest in Arunachal Pradesh. Interestingly, Meghalaya is found to have higher per capita availability of ginger than national availability.
KF Wiersum in his book- "Diversity and change in homegarden cultivation in Indonesia", (2006) found that, ginger cultivation lead to disappearance of shifting cultivation in Indonesia. Further, he studied the impact of ginger cultivation on Socio-economic wellbeing of the country and also on several geographic and socio-economic factors affecting ginger cultivation. His study revealed that, ginger field provides higher employment to women than male counterparts in Indonesia. Further, productivity of ginger is found to have been decreasing owing to diversification of economic activities of its cultivators.

Y. Sangita Devi, in her research paper- "Potential of Ginger in Manipur", (2006) has studied on ginger which is abundantly found in many parts of Manipur. Further, an attempt is made to study small scale industries about the processing of foods like preparation of fruit juices under the guidance of food and technology in collaboration with Industry Department. The study revealed that, Manipuri used the extract of Rhizomes mainly outer layer for curing paralysis and to improve blood circulation. Every house in Manipur is found to have used the fresh ginger for the most of the curry and in making tea. Manipuri are also found to have started many small industries on food processing like preparation of fruit juices including ginger. Researcher has further put suggestions on behalf of the Rural and Urban Development Women’s Association for innovate ideas by producing more products from the ginger.

G.K. Nair in his research paper- "Ginger exports rise as imports turn unattractive", (2007) has analyzed ginger in terms of export potentiality, production trend and price competitiveness in the international market. In addition to this, he made comparative study between India and china in terms of quality, volume of production and total export of ginger. His research paper revealed that, competitive prices
coupled with superior quality seem to have pushed up Indian exports of ginger during then fiscal period. Further, the Indian production of dried ginger was estimated at 20,000-25,000 tonnes and exports of ginger during April-July 2006 is found to have went up to 3,000 tonnes valued at Rs 13.55 crore. He hold the view that, the withdrawal of tax on ginger by the Kerala Government had also helped in keeping the prices below the landed cost of imported ginger. Further, it is unveiled from his paper that, Ginger produced in the North-Eastern states has high fibre content and is exported mainly to Pakistan and Bangladesh and un-remunerative prices often dissuade farmers from taking up its cultivation in most of the producing countries, especially in Africa. India is found to have dominated in ginger oil and oleoresin trade with about 50 per cent share in global market and the world trade in ginger excluding ginger oil and oleoresin is estimated at $190 million, of which India's share is six per cent.

An article of NABARD entitled “Model Bankable Scheme for Organic Cultivation of Ginger”, (2007) has highlighted international and Indian scenario on ginger with respect to production, area under cultivation, import and export of ginger. It also gives detail accounts on Organic farming of ginger with discussions on different important themes like, climate & soil, soil rotation, Buffer zone, land preparation, planting material, planting, irrigation, cultural practices, manuring, plant protection, harvesting and preservation of seeds ginger etc. Further, it has thrash out various financial aspects under organic ginger cultivation covering topics like sale price, cost of cultivation, margin, bank loan, rate of interest and security etc. Further, present study has found that ginger produced in India is mostly mean for domestic consumption and only a small quantity is exported. But, in other producing countries domestic consumption is less and export is more. This paper has also revealed that
the global demand for Indian ginger is high on account of its lemony flavour which enabled India to earned a foreign exchange of around Rs.40 crores during 2005-06 through ginger exports in various forms. Moreover, the present study has declared Cochin ginger cultivated in Kerala to be the finest quality of Indian ginger which has extensive demand in the world market.

M. Shafique Ahmed in his article—“Ginger cultivation and imports”, (2008) made an attempt to highlights uses, propagation, congenial climatic conditions required for ginger cultivation and major producer, exporter and importer of ginger across the world. Beside this, he also urged on more research to produce ginger at Pakistan to reduce the degree of dependency on import. Researcher has found that Pakistan produces chilies, coriander, garlic, onion, and turmeric in commercial quantity but its ginger production is not enough to meet local requirements. Fascinatingly, ginger is found to have cultivated in 10 districts in upper, middle and lower Sindh of Pakistan only. Moreover, Pakistan is found to have depended mostly on imports to meet its domestic demand of ginger as the majority of people prefer to season meat, pulses and vegetables with it. Further, researcher has declared Indian ginger to have edge in international markets due its color, standard of cleanliness and quality.

G.N. Asumughha, P.M. Kormawa, N.C. de Haan in their research paper— “Gender Impacts of Small Farmers Commercialization of Ginger (Zingiber officinale Rosc.) Enterprise in Nigeria”, (2009) have addressed the issue of gender and agricultural commercialization among smallholders in Nigeria with respect to ginger. Their study focused on the relative or absolute roles, gains and losses by men and women farmers as a result of commercializing small ginger farm. Moreover, their study revealed that, men take decision mostly on ginger production while
ginger marketing is more of the women job, women income is devoted to food and children care while men take care of education of the children, income and health facilities to members of the household has improved, workload and responsibility for men for making major decisions while women for making decision during maintenance of ginger field have increased.

Hemant Chauhan in his article “Himachal farmers demand minimum support price for Ginger crop”, (2009) has made an attempt to address demand of Ginger farmers and traders in Sirmour district of Himachal Pradesh to announce minimum support price for ginger by the Government similar to apple in Shimla and for proper management of market by the Government enabling them to directly export their produce. Further, his article revealed that Bella valley in Sirmour district of Himachal Pradesh is famous for producing varieties of quality ginger with great demand in Pakistan, Afghanistan, the Middle East and several Central Asian countries allowing ginger as main life stays of many people. In addition, dry ginger of the valley is found to have high medicinal value as a kilogram of dry ginger worth rupees 500 and ginger is cultivated in 1850 hectares of land with overall production of 24,000 tons.

1.3. SIGNIFICANCE OF THE STUDY

Ginger has many uses. In Europe and the Western countries, Ginger is a treasured preservative spice and flavoring agent. It is used extensively in pickles, sauces, cakes, cookies, jams and marmalades, brine, candies, ginger ale, ginger beer, curries, tea and many other food items. Ginger has medicinal properties and appreciated from ancient times. It is believed to be an effective cure for cough and cold. The curative properties of Ginger are used in medicines as it is widely being
used for gastro-intestinal and carminative ailments; analgesic and a sedative ailments; healing the wounds of the womb after delivery of baby; febrifuge and an antibacterial agent; Ginger ale as an effective remedy for travel sickness and nausea etc. As a matter of fact, Arunachal Pradesh has been practicing cultivation of cash crops and undertaking horticulture since relatively long period of time owing to the special type of geographical features and settings nature has adorned to this young state and taught people of this state to make horticulture and cultivation as the main life stays. As far as the ginger cultivation is concern nature has particularly bestowed the Lower Dibang Valley and Lohit districts with required soil, topography and conducive climate for taking up commercial cultivation of ginger and the local people have taken full advantage of it. Since early 1990s, Ginger cultivation has dramatically revolutionized and reshaped the economic conditions of these districts in particular and economic structure of the state in general. This topic has been selected because the ginger cultivation has remarkably positive impact on income, saving, investment, acquisition of consumable and capital goods, self-employment opportunity, and overall socio-economic political wellbeing and welfare of the two districts under study.

In addition to this, no research activity has so far been carried out in this area of study. Present study helped the researcher to make in-depth study of the marketing and the impact of ginger cultivation upon strategic socio-economic variables like income, saving, investment, employment opportunity, educational development and heath care etc., in these districts in particular and the state in general.
1.4. OBJECTIVES OF THE STUDY

1. To review the development of ginger cultivation in the world, India, North-Eastern India, Arunachal Pradesh and the study area respectively.

2. To analyze impact of ginger cultivation on economic variables like, per capita income, saving, investment and employment generation etc.

3. To analyze impact of ginger cultivation on social variables like, construction of houses, development of agricultural lands, cannels and establishment of educational and medical institutions and other social assets.

4. To study the marketing of ginger product in the study districts.

5. To examine the various problems while undertaking large-scale ginger cultivation.

1.5. UNIVERSE OF STUDY

The study area stretch over two major ginger producing districts namely, Lower Dibang Valley and Lohit districts of Arunachal Pradesh. The present study has been conducted in 10 villages namely, Bijari, Meka, Koronu, Jia, Bolung, Parbuk, Iduli, Kangkong, Balek, and Itili of Lower Dibang Valley district and another 10 villages namely, Lathao, Wakro, Sunpura, Paya, Namsai, Chowkham, Adi-Ningru, Kambu, Alubari and, Soluntu of Lohit district of Arunachal Pradesh respectively. The villages have been selected deliberately because most of the commercial ginger cultivation is undertaken in these 20 villages of the study area. The facts and figures pertaining to ginger cultivation over the last 10 years i.e., from 2000-2001 to 2009-2010 have been taken into consideration for the present study.
1.6. HYPOTHESES

The following hypotheses are made, the validity or negation of which has been tested during the course of study.

1. Lower Dibang valley District and Lohit districts have been endowed with promising as well as conducive land and climate for undertaking cultivation of cash crops including, ginger.

2. The relationship between ginger cultivation and economic status of its cultivators in the study area is significant.

3. There is a significant co-relationship between ginger cultivation and social status of its cultivators in the study area.

4. Government supports to boost up the ginger cultivation is not significant in the study districts.

1.7. RESEARCH METHODOLOGY

During the present study an effort has been made to make the study empirical based on survey and statistical methods. The work is purely based on both primary and secondary data.

For the collection of primary data a field survey was conducted over 20 villages and 10 ginger cultivators from each village were interviewed personally with the help of well-designed questionnaires. Altogether, 200 ginger cultivators have been selected at random basis and interviewed to know the price & production trend, cultivation pattern, marketing, problems associated with ginger and impact of ginger cultivation on the major economic as well as social variables in the two districts in particular and state in general. It has been further supplemented through informal discussion with district administrators like, B.D.O, Project officers, District Agriculture officer (D.A.O.),
Agriculture Development officer (A.D.O), District Horticulture Officer (D.H.O), and other knowledgeable persons in this field.

As regard to secondary data, reports and publication of Directorate of economics and statistics and Horticulture, Govt. of Arunachal Pradesh and data from government agencies like DRDA, Block office, D.A.O office, A.D.O office, D.H.O office etc, have been used extensively for the present study. In addition to this, various published books, research papers, journals, articles, committee reports on ginger cultivation and other unpublished works have also been referred to for better understanding of the research problem. However, internet has been one of the most used sources of secondary data for the present study.

Primary and secondary data has been analyzed, interpreted and summarized with the help of various types of statistical tools like percentage, ratio, graph, and diagram, mean, correlation etc. Audio-visual tools viz. tape recorder, and digital camera have also been used to facilitate the collection and visual representation of data.

1.8. CHAPTERISATION OF THE STUDY

The thesis is divided into seven chapters and each of them distinctively analyzes various points related to the different aspects of the present study. The introductory chapter deals with origin of research problem, significance of study, interdisciplinary relevancy, objectives, universe of the study, methodology, hypotheses, review of some relevant literatures and chapterisation of the study.

The second chapter is exclusively devoted to origin of the districts under present study area and its current geographical and socio-economic profile.
The third chapter presents detailed account of the status and development of ginger cultivation in the world, India, North-East India, Arunachal Pradesh and, the districts under study area.

The fourth chapter contain report of the field study that contain marketing of ginger covering production, price behavior, transportation, storage, financing etc, of ginger of the study area.

A detailed report of the field study has been presented in the fifth chapter that encompasses impact of ginger cultivation on strategic and selective socio-economic variable like, income, saving, investment, acquisition of capital assets, standard of living, education and health care etc, of the study area.

The sixth chapter covers various problems associated with the commercial ginger cultivation and its marketing of the study area.

Summary, important findings of the study and suggestions are outlined in the last chapter.