



## INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE AND MANAGEMENT

### CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	A STUDY OF RETURN, LIQUIDITY OF SECTORAL INDICES, MARKET INDEX RETURN OF INDIAN FINANCIAL MARKET (BSE) <i>PASUPULETI VENKATA VIJAY KUMAR &amp; PIYUSH KUMAR SINGH</i>	1
2.	CROSS CULTURAL DIFFERENCES IN MULTINATIONAL COMPANIES AND IT'S AFFECT ON INTERNATIONAL BUSINESS <i>ROSINA ABDULLAH &amp; SALMA UMER</i>	9
3.	BALANCE OF PAYMENT ADJUSTMENT: AN ECONOMETRIC ANALYSIS OF NIGERIA'S EXPERIENCE <i>ALEX EHIMARE OMANKHANLEN &amp; DICK OLUKU MUKORO</i>	16
4.	REVIEW OF PERFORMANCE ASSESSMENT TOOLS USED BY HEALTH CARE ORGANIZATIONS IN LOW RESOURCE SETTING COUNTRIES <i>OM PRAKASH SINGH &amp; SANTOSH KUMAR</i>	24
5.	FOREIGN EXCHANGE MARKET AND THE NIGERIA ECONOMY <i>DR. OFURUM CLIFFORD OBIYO &amp; LEZAASI LENE TORBIRA</i>	29
6.	GROWTH IMPLEMENTATION STRATEGIES IN APPAREL RETAILING – A CASE STUDY <i>DR. GIBSON G VEDAMANI</i>	33
7.	TOURISM IN INDIA: VISION 2020 <i>VISHWANATH V SIDDHANTI &amp; DR. RAMESH AGADI</i>	39
8.	A STUDY OF THE VARIOUS PERFORMANCE MANAGEMENT SYSTEMS ADOPTED BY SELECT INDIAN PRIVATE SECTOR ORGANISATIONS <i>BINDU NAIR &amp; DR. ASHISH PAREEK</i>	43
9.	FACTORS INFLUENCING MOBILE USERS IN SELECTING CELLULAR SERVICE PROVIDERS IN INDIA: AN EMPIRICAL STUDY BASED ON STRUCTURED EQUATION MODEL <i>G. N. SATISH KUMAR</i>	47
10.	TRAINING AS A TOOL FOR HUMAN RESOURCE DEVELOPMENT: A CASE STUDY OF TATA TELESERVICES LTD., JAMMU (INDIA) <i>DR. JAYA BHASIN &amp; VINOD KUMAR</i>	53
11.	WOMEN EMPOWERMENT AND COOPERATIVES- A COMPARATIVE STUDY OF GENERAL COOPERATIVES AND FISHERIES COOPERATIVES <i>DR. PRAMEELA S. SHETTY &amp; DR. T. N. SREEDHARA</i>	62
12.	LIQUIDITY MANAGEMENT IN MAA FRUITS PVT. LTD. <i>DR. G. RAMANAIAH</i>	68
13.	SELF EMPLOYMENT PROGRAMME IN ORISSA: A CASE STUDY W.R.T. KHURDA DISTRICT <i>PRAVASH RANJAN MOHAPATRA</i>	72
14.	TURNAROUND STRATEGIES: A CASE STUDY OF NTC <i>DR. HIMA GUPTA &amp; J. R. DIKSHIT</i>	75
15.	PATIENTS' PERCEPTIONS OF OUTPATIENT SERVICE QUALITY - A CASE STUDY OF A PRIVATE HOSPITAL IN SOUTH INDIA <i>RAMAIAH ITUMALLA &amp; DR. G. V. R. K ACHARYULU</i>	80
16.	REDRESSAL OF CUSTOMERS' GRIEVANCES IN BANKS: A STUDY OF BANK OMBUDSMAN'S PERFORMANCE IN INDIA <i>DR. TEJINDERPAL SINGH</i>	84
17.	EXCELLENT PRACTICES AMONG BANKS FOR INCLUSIVE GROWTH – EMPIRICAL EVIDENCES FROM RECENT LITERATURE SURVEY <i>ASHA ANTONY. P</i>	91
18.	PERFORMANCE EVALUATION OF PUBLIC SECTOR BANKS IN INDIA: AN APPLICATION OF CAMEL MODEL <i>K. V. N. PRASAD, DR. D. MAHESHWARA REDDY &amp; DR. A. A. CHARI</i>	96
19.	ESOP DESIGN PRACTICES IN INDIAN IT & ITES AND PHARMACEUTICAL INDUSTRIES <i>DR. G. SRIDHARAN &amp; AMARAVATHI. M</i>	103
20.	AN ANALYSIS OF THE FACTORS OF ACADEMIC STRESS AMONG MANAGEMENT STUDENTS <i>DR. N. P. PRABHAKAR &amp; MRS. CH. GOWTHAMI</i>	109
21.	LIQUIDITY, PROFITABILITY ANALYSIS OF INDIAN AIRWAYS SECTOR - AN EMPIRICAL STUDY <i>SUVARUN GOSWAMI &amp; ANIRUDDHA SARKAR</i>	116
22.	UNDERSTANDING POSITION OF COMMERCIAL GINGER CULTIVATION IN LOWER DIBANG VALLEY DISTRICT OF ARUNACHAL PRADESH <i>SRI. PHILIP MODY</i>	123
23.	FINANCIAL INCLUSION THROUGH MOBILE WAY: A CASE STUDY OF M – PESA <i>BHAVIK M. PANCHASARA &amp; HEENA S. BHARADIYA</i>	126
24.	FOREIGN INSTITUTIONAL INVESTORS (FIIS) INVESTMENT IN INDIA: A TREND ANALYSIS OF MONTHLY FLOWS DURING JANUARY 2004 - AUGUST 2010 <i>DR. VINOD K. BHATNAGAR</i>	131
25.	MAKING FINANCE ACCESSIBLE THROUGH FINANCIAL INCLUSION: EVIDENCES FROM ASSAM <i>RESHMA KUMARI TIWARI &amp; DR. DEBABRATA DAS</i>	138
	REQUEST FOR FEEDBACK	151

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## UNDERSTANDING POSITION OF COMMERCIAL GINGER CULTIVATION IN LOWER DIBANG VALLEY DISTRICT OF ARUNACHAL PRADESH

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**DOIMUKH PAPUM PARE, ARUNACHAL PRADESH**

### ABSTRACT

*Juvenile Lower Dibang Valley district is swollen with pride for being occupying first slot in terms of both, area under commercial ginger cultivation and its production throughout the Arunachal Pradesh. Commercial ginger cultivation in Lower Dibang Valley deserves special mention for being one of the most known emerging cash crops with high business and marketing potentiality in the entire region. Interestingly, in Lower Dibang Valley district of Arunachal Pradesh, significant percentages of about 60 percent of every household undertake ginger cultivation for which on an average 20 percent of dry cultivable land are used. On an average, every household produced 238 quintal of ginger in a year during the study period. Commercial ginger cultivation has been one of the most prominent sources of employment having positive and remarkable impact on economic wellbeing of ginger growers in particular and socio-economic development of the district in general. In this paper an attempts has been made to analyze average household' area under commercial ginger cultivation and average household' production of ginger in the Lower Dibang Valley district of Arunachal Pradesh. Moreover, it also endeavor to study the co-relationship between area under ginger production and its production and offer suggestions to bring about improvement in production and marketing of ginger in the study area.*

### KEYWORDS

Arunachal Pradesh; Commercial ginger cultivation; Lower Dibang Valley.

### BACKDROPS

**A**round the globe, India, China, Nigeria, Indonesia, Bangladesh, Thailand, Philippines and Jamaica are well known to have undertaken commercial ginger cultivation and export this popular herb mostly to United Kingdom, United States and Saudi Arabia etc. India has been taking pride in the realm of ginger cultivation as she alone supplies about 50 percent of the global demand of ginger. In Indian context, ginger is cultivated in almost all states. Kerala is the major ginger growing state. Other major ginger growing states are Orissa, Meghalaya, Himachal Pradesh, Karnataka, Assam, and Arunachal Pradesh respectively. 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 also medicinal properties and appreciated from ancient times. Ginger, one of the most known budding cash crops with high business and marketing potentiality has been under cultivation since time immemorial in the Lower Dibang Valley district of Arunachal Pradesh. Traditionally, in Lower Dibang Valley district of Arunachal Pradesh, ginger cultivation is restricted to kitchen garden only. Besides, ginger being a local spice, indigenous people of this juvenile district uses it in different junctures of their life like- birthday celebration, marriage ceremony, performing last rites, innuagration of houses, festival, religious offering to spirits etc.. The local people of the study area perceive it more like socio-cultural object than as a spice or medicine, which is deeply embedded in social fabric of the native people of this young district. Interestingly, early 1990's marks beginning of commercial ginger cultivation in Lower Dibang Valley. Significant percentages of about 60 percent of every household undertake commercial ginger cultivation for which about 20 percent of dry cultivable land is being used. In fact, commercial ginger cultivation has been constantly eroding socio-economic face of the Lower Dibang Valley district and gave a changed economic shape through providing additional employment opportunities, increasing income, saving, investment and taken up social status of the study area to a new height.

### OBJECTIVES

The main objectives of the present study are:

1. To analyze average household area under commercial ginger cultivation and its corresponding production in Lower Dibang Valley.
2. To find out relationship between area under commercial ginger cultivation and its production in the study area.
3. To offer constructive suggestions to bolster production and marketing of ginger in the study area.

### UNIVERSE OF STUDY

The observation made in this paper is basically based on the field survey conducted on 100 sample ginger cultivators of Lower Dibang Valley district of Arunachal Pradesh during the period from 2000-01 to 2009-10. The present study has been conducted in 10 villages of Lower Dibang Valley district of Arunachal Pradesh, where ginger cultivation are undertaken on large scale namely-Roing, Meka, Koronu, Jia, Bolung, Parbuk, Iduli, Kangkong, Balek, and Itili. The villages have been selected deliberately because; most of the commercial ginger cultivation is undertaken in these 10 villages in the entire district.

### METHODOLOGY

During the present study, an effort has been made to make the present study empirical, based on survey and statistical methods. The work is based on both primary and secondary data. For the collection of primary data, 10 ginger cultivators each from 10 villages have been interviewed personally with the help of well-designed questionnaires. Altogether, 100 sample ginger cultivators have been drawn at random basis. While selecting the ginger cultivators, utmost care has been taken to select ginger cultivators from different categories of people to represent the maximum character of the universe like, males and females and owners and laborers to ascertain trend in development of commercial ginger cultivation in the study area. As for secondary data, various published books, research papers, journals, committee reports and other unpublished works on ginger cultivation have 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.

### ANALYSIS AND INTERPRETATION OF FIELD DATA

Momentum of large-scale commercial ginger cultivation picked up in early 1990's in Lower Dibang Valley district of Arunachal Pradesh. During the field study, it is found that about 60 percent of every sample ginger growers undertakes commercial ginger cultivation for which about 20 percent of their dry cultivable land is used for in the Lower Dibang Valley District of Arunachal Pradesh. Observations made throughout the study period in study area have been analyzed and interpreted under three major heads that are as follows:



**1. AVERAGE HOUSEHOLD'S AREA UNDER GINGER CULTIVATION**

As per the information provided in the table 1 and graphs 1, area under commercial ginger cultivation in Lower Dibang Valley is found to have increased constantly with exception to the block years 2008-09 and 2009-10, which has witness negative growth of (-) 6.25 and (-) 6.6 respectively. It is observed that, area under ginger cultivation has shown 100% growth rate during the year 2002-03. However, zero percent growth of area under ginger cultivation has been evident during 2003-04 and 2005-06 respectively.

**TABLE 1: AVERAGE PER HOUSEHOLD'S AREA UNDER GINGER CULTIVATION AND ITS PRODUCTION IN THE LOWER DIBANG VALLEY DISTRICT OF ARUNACHAL PRADESH**

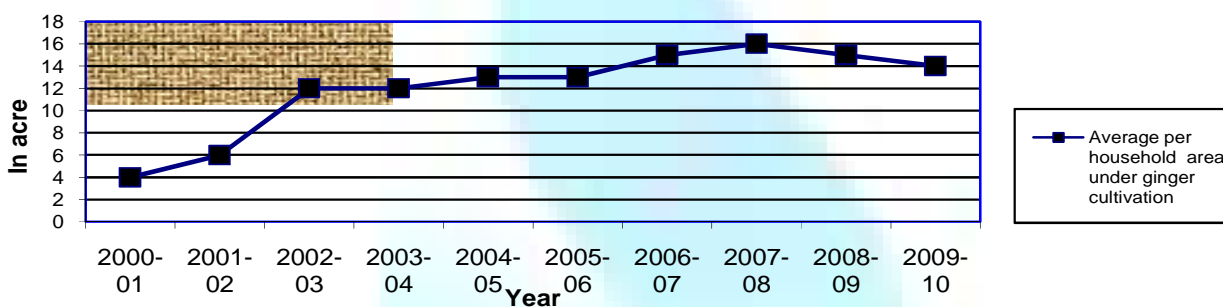
Year	X (in acre)	% age Changes	Y (in quintal)	% age Changes
2000-01	4	-	112	-
2001-02	6	(+) 50	156	(+) 39.28
2002-03	12	(+) 100	260	(+) 66.6
2003-04	12	0	266	(+) 2.3
2004-05	13	(+) 8.3	269	(+) 1.1
2005-06	13	0	274	(+) 1.8
2006-07	15	(+) 15.3	279	(+) 1.8
2007-08	16	(+) 6.6	255	(-) 9.4
2008-09	15	(-) 6.25	251	(-) 1.6
2009-10	14	(-) 6.6	256	(+) 2
Total	120		2378	
Average	12		237.8	

Source: Compiled from field data.

**Note:**

1. X= Average per household area under ginger cultivation.
2. Y= Average per household ginger production.

**GRAPH 1: AVERAGE HOUSEHOLD'S AREA UNDER GINGER CULTIVATION**



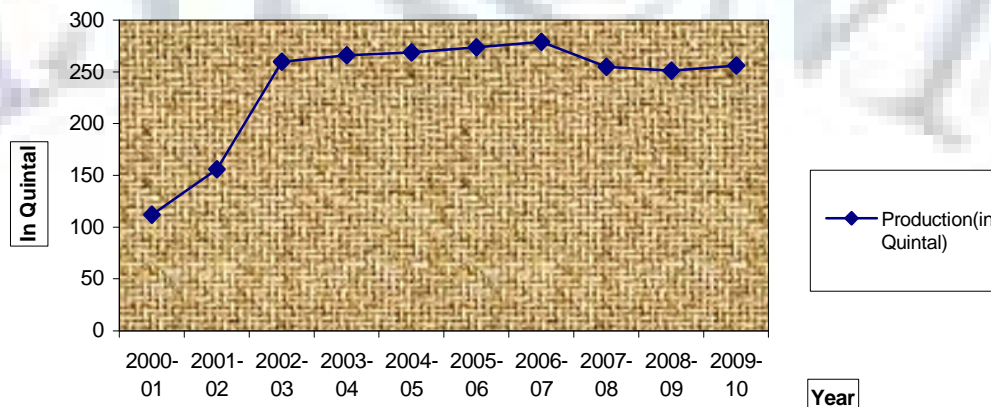
During 2007-08, average per household area under ginger cultivation is found to have achieved peak with 16 acres. On the contrary, lowest of the same is observed during 2000-01 throughout the study period. In addition, mean and median of average per household area under ginger cultivation during 10 years study period are 12 and 13 acres respectively.

It is evident from graph 1 that, there is a sharp increase in the average per household area under ginger field in the first quarter followed by steady rises during second and third quarter all through the study period. However, the last quarter of the study period revealed declining trend in terms of average per household area under ginger cultivation. Altogether, the total shape of average per household area under commercial ginger cultivation is found healthy in the study area that implies farmers are highly motivated, competitive, enterprising and benefited pertaining to commercial ginger cultivation. It is fascinating to note that, average per household area under commercial ginger cultivation start falling from 2008-09 which may be attributed to repeated spoilage of ginger fields due to hostility of monsoon; shift of ginger grower to tea & orange plantation; lack of government initiatives in promoting marketing and its cultivation; non-existence of corporate investment and; non-availability of easy and cheap finance in the study area etc. It is evident from table 1 that, total area under ginger cultivation during the reference period is 120 acres. Value of standard deviation of average per household area under ginger cultivation of the present study is 3.94, which signify that, area under commercial ginger cultivation in the study area is reasonably uniform, homogenous or consistent. Moreover, it also foretells lesser chances of falls in terms of area under ginger cultivation in the near future in the study area.

**2. AVERAGE HOUSEHOLD'S PRODUCTION OF GINGER**

As evident from table 1 and graph 2 that, there has been continuous increase in average per household's production of ginger during the period of study with exception to the block year, 2007-08 and 2008-09 which have shown negative growth of (-) 9.4 and (-) 1.6 respectively. It is observed that, ginger production has increased at increasing rate in the first quarterly phase then, started increasing at decreasing rate in second quarterly phase and remained almost constant in the middle of study period. It is noteworthy to mention that, ginger production decreases at decreasing rate in the last quarterly phase.

**GRAPH 2: AVERAGE PER HOUSEHOLD'S PRODUCTION OF GINGER**



However, last block year of the study period has shown a bit improvement in production of ginger. Average per household's ginger production has been observed the highest during 2006-07 with 279 quintal. On the contrary, lowest ginger production throughout the study period is observed during 2000-01. Altogether, total average sample ginger growers are found to have produced 2378 quintals of ginger during ten years time span. In addition, mean and mode of ginger production pertaining to present study are 237.8 and 258 quintals. Fascinatingly, more than 16 sample ginger cultivators are found to have produced favorably up to 1100 quintals of ginger that fetched them more or less an amount of Rs. 12 Lakhs in some years. During the field study, average per household ginger cultivators are reported to have dispose-off 77 percent of their produces to the traders and rest 23 percent are kept as seed for continuation of ginger field. Moreover, as far as domestic consumption of ginger is concerned, farmers mostly cultivate small plot of land nearby their kitchen to meet their day-to-day requirement of ginger. It is interesting to note that, a proportional change in average per household's ginger production in some years is not in tune with the proportional changes in area under ginger cultivation. Value of standard deviation of average per household's ginger production under present study is 56.4, which signify that, ginger production in the study area is significantly inconsistent, fluctuating and unpredictable.

Moreover, it can be predicted that production of ginger in the study area may either increase or decrease markedly in the near future. The significant deviation in ginger production can be mainly akin to two reasons; firstly, due to unfavorable climatic condition in some years (excessive rainfall, sunshine, moisture etc) and secondly, due to massive spoilage of ginger rhizomes by pest, worms and insects etc.

### 3. RELATIONSHIP BETWEEN AVERAGE PER HOUSEHOLD'S AREA UNDER GINGER CULTIVATION AND ITS PRODUCTION

According to table 1, coefficient of correlation of X variable and Y variable is 0.916 with P-Value = 0.000. Value of coefficient of correlation is positive and very close to +1 which gives crystal clear reflection that area under ginger production has significant positive relationship with ginger production. Moreover, the calculated value or P- Value is Zero giving testimony of strong dependency of Y with X variable. Thus, there lies significant positive relationship between average per household's area under ginger field and average per household's ginger production throughout the study period in Lower Dibang Valley district of Arunachal Pradesh.

### SUGGESTIONS

In the context of globalization and stiff market antagonism, commercial ginger cultivation and its marketing have miles ahead to travel in the Lower Dibang Valley district of Arunachal Pradesh. Following are some of the important aspects that demands immediate attentions to bolster commercial ginger cultivation and its marketing in the study area that are summarize as follow:-

- A. Given the present position in production of ginger, Govt. as well as corporate sector should setup ginger processing plants in and around the study area.
- B. To nosh financial hunger of ginger cultivators, commercial banks, development banks and other financial institutions should come forward with special and attractive financial packages exclusively meant for its growers.
- C. Improved agricultural implements and tool-kits at subsidized rates should be supplied to the farmers. In addition, marketing supports be given by the government enabling them to excel at par with the ginger cultivators across the world.
- D. Intensive trainings, workshops, demonstrations should be undertaken to provide necessary skills and knowledge to farmers enabling them to undertake cultivation of ginger on scientific line.
- E. There should have free mobility of skilled labor and technical know-how into the study area.
- F. There should have a vibrant transportation and communication networks in the study area in order to increase marketability of ginger.
- G. There should have cold storage to preserve ginger and insurance companies should come forward at growers' doorsteps with various policies in order to shoulder up risks and uncertainties arising out of its cultivation.
- H. There should have Farmers' union that would help them to have better bargaining power and in making direct joint marketing of their product at more promising terms.
- I. Keeping these problems in mind, the agricultural policy of state should attempts to incorporate majestic plans and programs to develop commercial ginger cultivation in the Lower Dibang Valley district in particular and the Arunachal Pradesh in general

### CONCLUSION

Commercial ginger cultivation has been one of the most promising sources of employment and proven engine for socio-economic development of the Lower Dibang Valley. In fact, cultivation of ginger and its marketing has changed the economic face and structure leaving behind positive impacts on income, per capita income, saving, investment and creation of social assets in the study area. However, ginger cultivation in study area has yet to come to full shape in terms of its production and distribution. Despite occupying first slot in area under ginger cultivation and its production in the entire state, the study area has still long way to travel and develop in terms of promotional activities, research & development activities, warehousing, processing unit, weighing, packaging, and insurance activities etc, in connection with ginger. It is said that opportunities takes birth amidst problems. Thus, Govt., NGOs, private investors and corporate entities should give eyes and perceive these problems as investment opportunities, which would for sure, help Dibang Valley be seen around in global map of commercial ginger production and its marketing.

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