



The food processing industry in Karnataka: An overview

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Abstract

The MSMEs in India Contribute more than 8 per cent of country's GDP and cover a wide spectrum of economic activities. With more than 40 million enterprises, they employ around 100 million individuals, next only to the agriculture sector. They also contribute around 45 percent of the total manufacturing output and about 40 percent of India's total exports. They manufacture over 6000 products, ranging from the traditional products to high-tech items, in addition to providing a wide range of services. Around 30 per cent of the GDP is contributed by the services sector and the remaining by the manufacturing sector. This translates to a gross value added of Rs.20.56 lack crore of the aggregate gross value added. This paper aims at bringing the growth and development of MSMEs in one of the prospering states of India, i.e. Karnataka.

Agro-based industries contributing one on the greatest role to the promotion of rural development and industrial activities so this kind of industries commonly located at rural and semi-urban area only besides which requires low investment so this kind of industries very suitable for less developed countries like India. Presently, agro-based industries growth is very stagnant because lack of capital so this factor affects the low employment generation activates particularly in rural area. However, agro-based industries contribute rural development and expansion of industrial activities. The present paper results discussed that increasing of industrial units, employment and investment situation in Karnataka. Further results found that the present emphasis on security-based credit is replaced by need-based credit so that the units could borrow credit on the promise of the higher expected rate of return in future. Non-availability of subsidy in time discourages entrepreneurs to undertake productive activities. The Government of Karnataka should take prompt action on this matter. The food-processing industry in India plays a vital role in the national economic development and has potential to meet the local needs and export requirements. It helps in processing agricultural products such as field crops, pulses, horticultural crops, livestock and fisheries and converting them to edible and other usable forms. This would generate employment opportunities for different types of skills through food processing, packaging, grading and distribution.

Keywords: agro-based industries, investment, employment, growth, Karnataka

Introduction

The MSMEs in India Contribute more than 8 per cent of country's GDP and cover a wide spectrum of economic activities. With more than 40 million enterprises, they employ around 100 million individuals, next only to the agriculture sector. They also contribute around 45 percent of the total manufacturing output and about 40 percent of India's total exports. They manufacture over 6000 products, ranging from the traditional products to high-tech items, in addition to providing a wide range of services. Around 30 per cent of the GDP is contributed by the services sector and the remaining by the manufacturing sector. This translates to a gross value added of Rs.20.56 lack crore of the aggregate gross value added. This paper aims at bringing the growth and development of MSMEs in one of the prospering states of India, i.e. Karnataka

MSMEs in Karnataka

Karnataka is one of the India's fastest growing states, having a strong industrial base and a vibrant service sector. The State has a host of large industries supported by a strong base of

Micro, Small and Medium Enterprises. Due to inherent advantages available in the State, the industry and trade sectors including the service sector are propelling the overall economic development of Karnataka. Hence, Karnataka is considered as one of the most industrially developed States in the Country. It has all the potential to stand out in the forefront and focus on the development of industries, trade and service sectors. It is the first State in the country to have brought out a State Industrial Policy during 1982-83, followed by successive State Industrial Policies in 1988, 1990, 1993, 1996 and in 2001. Due to the progressive policies and proactive measures of the Government and also the contribution of entrepreneurial fraternity and investors, today Karnataka has been recognized as one of the preferred destinations for investment. Karnataka is a State of action; the 30 districts which it has are unique in their own right, offering investment potential like no other State in the country. While nearly 69% of the population lives in rural areas, urbanization is fast increasing. It has witnessed rapid and unparalleled growth across the knowledge-based sectors. It has emerged as the 'Knowledge Hub of Asia'. Further, salubrious climate, vast natural resources, proactive

and growth-intensive Government policies led the State an edge over other states. There are over 700 Multinational Companies (MNCs) which are reaping the advantages by making Karnataka their home.

Agro-based industries can play a vital role in the economic development of all countries. They act as an agent of transforming the economy to the new heights of economic development. Japan for example took a programmatic view of its agricultural base and made the best use of it. When modernization of agriculture threw out a large agricultural population as surplus in agriculture, it was utilizing by starting and encouraging agricultural industries using as a sort of intermediate technology and tools. Japan has not used relatively simple improvement in technologies which do not differ widely from the traditional methods, nor do they involve heavy capital outlay. The agriculturists also did not go to distant places in search of employment. It was provided in and around their places of residence (Venkaiah V. 1987). Only a quarter of population depends upon agriculture, 35 percent of them have part time jobs in manufacturing industries and about 40 percent primarily rely on agriculture industries (Ramaswamy, 1969) [2]. The rapid economic prosperity in the U.S.A. was achieved through effective Agro-based industrial sectoral planning. The process promoted optimum production, income and employment opportunities and helped the U.S. economy to build a large exportable capacity which accelerated the tempo of capital formation (Bhargav, G. 1971) [4]. Dr. Kenneth Kunda introducing the second National Development Plan of the nations (1972-76) opined "For us developing rural areas and agro industries is a matter of life and death, though we do not underestimate the problems involved, we must first of all succeed in developing rural areas, no matter what our performance is in other sectors".

M.J. Nyerere, presented United Republic of Tanzania, introducing the Tanzania Second Five Year Plan (1969-74) says " the decision to give top priority to rural industrialization does not only affect what is done in rural areas, it also has implication in every other aspect of the development plan". Hence, adding value to agricultural produce is one of the most oblivious options for increasing the household income of families in rural areas. Rural based agro industries can prove to be of particular value in alleviating poverty in rural areas by raising income and creating employment, which would reduce migration from rural to urban centers. However, the role of Agro-based industries is important not just to alleviate rural poverty; many countries in Asian region depend on agro industries to produce exports. Many countries earn foreign exchange through the export of agricultural and agro industrial products and the same time, curb import demand. Diversifying the economy into higher value added agro industries can be strategic move for countries in Asian region. Since, it increases the income potential of the workers in agro industries in rural areas diversification is especially applicable to SMEs, such as the size of the firm does not pose a significant barrier to entry when diversification strategies are pursued. Many agro industrial processes are appropriate for initiation at the household or small enterprise level; thus, the match of "small and medium sized agro enterprises" could be very beneficial.

Review of literature

Before we come up with the objectives and other aspects of the study, let us observe the important studies already completed in this area.

Braun *et al* (2005) have observed the strategic issues and reform option for Indian agriculture and rural development. It has been addressed the need of increasing investments in rural infrastructure and to promote pro-poor rural and agricultural development. At the end, in the study it has been advised India to go for increase investments in rural infrastructure, reorient its social safety nets to create more employment in rural area and trade liberalization. The International Food Policy Research Institute (IFPRI) has recommended to increase investments in rural infrastructure including transport and information technology that connects villages and agricultural R & D. The study has advocated the necessity of liberalizing its marketing and trade policies to encourage coordination between farms, firms and forks (super markets) increased inflow and rural credit especially to small holders through Non Banking Financial Corporations The study of Sharma's (2008) on Indian's agrarian crises and corporate led contract farming has explored the determinants of participation in contract farming in order to observe whether contract farming affects the farm income or not. The study has focused on contract farming and its importance in the present context. Contract farming enable farmers to access better quality inputs such as seeds, fertilizers, pesticides, extension services and credit from the corporate sector. The study has concluded that there is a need to promote non-political farmers, organizations to improve small holders bargain power as well reduce transition costs to agribusiness companies.

Pray and Latha Nagarajan (2012) International Food Policy Research Institute's (2012) study on "Innovation and Research by Private Agribusiness in India" focuses on the private innovations and its contribution to the agricultural productivity and incomes. The study has disclosed that Research and Innovation by private industry led to the boom in cotton exports and to rapid increases in exports of generic pesticides and agricultural machinery. Similarly increases in innovation and Research and Development were led to increases in demand for agricultural products, and in turn demand for land, labor and water saving inputs. Ultimately this will be allowed large Indian Corporations, business houses, and foreign firms to invest in Agriculture and Agribusiness.

Need of the Study

India and China are the two largest agrarian economies in the world. Foreign investment is flowing to both the nations. No doubt, the policy reforms with regard to capital, human resource, and foreign nations certainly influence on the flow of foreign capital. The agriculture is the backbone of India-the emerging economy. More than 70% of the Indian population depends upon agriculture. Despite the tremendous development in agriculture, the Indian agriculture sector is not in a position to achieve self sustenance.

Katkar's study (1996) on 'Status and Prospects for Food Processing Industry in India'. It is based on secondary data. It observes that although the food processing industry has

attained the annual growth rate of 5.7% in 1992-93, yet a vast majority of agricultural produce is consumed to 1.6%. We are processing less than one percent of the total fruits and vegetables produced against 80% in South Africa, 65% in USA, 70% in Brazil and 83% in Malaysia. Indian processed fruits and vegetables exported constitute one eighth of those exported fresh. The lower level of Food Industry Development Index (FIDI-415) indicates dismal position of food processing industry development status mainly due to lower of various indices in comparison to developed countries. The higher production level especially of fruits and vegetables (3rd largest producer of the world) and higher Food Industry Potentiality Index (FIPI- 475.2) provides vital opportunity for the potential investors in this industry. The changing socio-economic scenario, technological development and environmental factors especially liberalization, globalization and export thrust of agricultural sector is a need to develop the required infrastructural facilities and improved technology in marketing, communication, processing, transportation and post harvest handling of agricultural produce. The government should pay due attention to make this a viable industrial sector and to earn more foreign exchange by capturing international market and to meet the growing domestic demand for processed food items.

Rai *et. al.* (1996) study on status and potential of agro processing industries in Haryana. In the present investigation an attempt has been made to examine the potential and problems of agro processing industries in Haryana State. The study revealed that there is tremendous scope for agro-processing industries in the state where supply of raw material, processing and marketing are not serious problems. Infrastructural facilities in the state are reasonably well developed. The future potential of developing agro-processing industries lies in wheat milling and rice milling, feed and concentrate industry, edible oil and cotton processing, sugarcane milling, fruit and vegetable processing and all the bye-product processing of the entire commodity system. The rising trend of converting the potential of main agro processing products as well as by-product need to be accelerated in future years. It would provide proper farm-industry linkage which will help development of agriculture by creating backward and forward linkage, generating more employment, adding value to farmers produce and increasing their net income.

The study was undertaken by Srinivas *et. al.* (1996) on 'Economics of Agro-processing: A Case of Cashew-nut processing in Andhra Pradesh' bring out the economics of processing of cashew nut at different stages. All the eleven registered processing units at Vetapalem were selected for the study. Data were collected with the help of well structured and pre tested schedules. Processing of cashew-nut has been discussed with considering different stages such as drying of nuts, roasting of nuts, shelling of nuts, drying of shelled kernels, peeling, grading, conditioning, packing etc. cost incurred at various stages of processing mainly confined to labourer and material cost. It is concluded that processing is an important operation to get the final consumable product from cashew nut. The major costs are processing of cashew-nut, packing of graded kernels, shelling of roasted nuts and peeling of shelled kernels.

An overview of integrated agribusiness development policy (IADP)-2011 of Karnataka

The Govt. of Karnataka has developed Integrated Agribusiness Development Policy (hereafter called IADP) in 2011 covering agriculture and allied sectors (like horticulture, fisheries, animal husbandry, sericulture and food processing etc). By admitting the constraints and drawbacks in Supply Chain Management (SCM), post-harvest losses and agri-exports, the government has expected substantial changes in terms of technology, markets, institutions and policy and in turn, it has also expected to increase in income of farmers, state's GDP, better value addition and above all the food security. The IADP-2011 came into existence from 22-02-2011. The strategic objectives of the policy are:

1. Substantial increase in investment is expected to improve the agricultural value chain and has assumed drastic decrease in transaction costs.
2. Creation of favourable business environment for private sector to take part in research related activities and agro-ecological activities.
3. Modernisation of existing agri-infrastructure in the state: Policy aims to bring modernisation in existing agri-infrastructure, cold chain, controlled atmospheric storage, refrigerated, transport, agri-clinics, food processing corridor. Agri-business investment regions, food parks, agri-SEZs etc, agro-based industry including dry land farming, precision farming, extensive IT & GIS application in agriculture and farming solutions.
4. Boosting agro-exports by meeting EU, HACCP, & other international standards
5. Emphasizing small scale agro-based units to remain competitive in global market
6. Inviting private investments in Agriculture and allied sectors

Objectives of the Study

The specific objectives of the investigation which is empirical in nature are as follows

1. To identify the role of agro industries India and in Karnataka,
2. To trace out the major problem faced by the agro industries in the study area;
3. To suggest remedial measures to improve their performance.

Methodology

The main source of secondary data was is Annual Survey of Industries (ASI) processed by the Central Statistical Organization (CSO).

Growth of Agro Industries in Karnataka Agro industries occupy an important place in the industrial structure of Karnataka. An attempt has been made here to discuss the place and growth of agro industries in Karnataka. To sum up, variety of crops, food, non-food, garden and plantation crops grown offered immense possibilities for a wide range of agro industries to come up in the State. Pattern and Trends of Agro industries in Karnataka The pattern and trend of agro industries in the economy of Karnataka is widely recognized and needs no emphasis. They could provide vast employment opportunities at a comparatively low investment and with simple tools, machineries and equipment.

Pattern and Trends of Agro industries in Karnataka

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Table 1: Food Industries of Karnataka (Value: Rs. in Lakh & Others in Number)

Year	Units	Investment	Employment	Output
2002-03	1460	672311	91179	1217435
	(21.92)	(15.10)	(18.76)	(18.53)
2003-04	1510	700393	87684	1302583
	(22.35)	(14.78)	(17.28)	(16.12)
2004-05	1345	700013	82482	1369334
	(18.48)	(13.02)	(14.90)	(12.58)
2005-06	1473	844411	96970	1958577
	(19.69)	(13.61)	(15.10)	(14.93)
2006-07	1413	876367	100937	2114021
	(18.58)	(12.43)	(14.17)	(12.98)
2007-08	1505	1114287	94600	2005248
	(18.60)	(12.92)	(13.06)	(10.88)
2008-09	1601	1138906	100306	2932703
	(19.48)	(09.85)	(13.02)	(12.98)

Note: Agro food industries NIC code 15, 16 and 22 in 2002-03, NIC code 15 and 16 in 2004-05, NIC code 10, 11 and 12 in 2008-09.

Source: Compiled from Various Reports of Annual Survey of Industries.

The above table shows that clear picture of food industries in Karnataka during the period of 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09. It is observed from the table that, the number of all food industries of agro industries in Karnataka accounted for 21.92 percent of total SSI's in 2002-03 and it has increased to 22.35 percent and declined to 3.87 percent (18.48 percent) by 2003-04 and 2004-05 respectively and it further negatively increased to -1.21 (19.69 percent) and it has marginally increased to 18.60 percent and 19.48 percent by 2007-08 and 2008-09 respectively. These agro food units graph shows that its percentage has been also low because some industries have sick and marginally sick and entrepreneurs have faced various problems.

The capital investment has decreased from 15.10 percent to 14.78 percent by 2002-03 to 2003-04 and it further to rose by 13.02 percent to 13.61 percent in 2004-05 and 2005-06 again this investment activities also declined to 12.43 percent to 12.92 percent by 2006-07 to 2007-08 and further to 09.85 percent during 2008-09.

The number of persons employed shows a declining trend from 18.76 percent to 39.43 percent from 2002-03 and 2003-04 in total SSI's in Karnataka and further employment situation has declined from 14.90 percent to 15.10 percent during 2004-05 and 2006-07. Hence it has further decreased to 13.06 percent by 2007-08 and further to 13.02 percent in 2008-09.

Gross output has decreased from 18.53 percent in 2003-04 to 16.12 percent by 2003-04 and it has decreased from 12.58

percent to 14.93 percent by 2004-05 and 2005-06. Whereas, the agro food industrial gross output has marginally decreased from 12.98 percent in 2006-07 to 10.88 by 2007-08 and further to 12.98 percent in 2008-09.

Table 2: Nonfood industries of Karnataka (Value Figures in Rs. Lakh; Others in Number)

Year	Units	Investment	Employment	Output
2002-03	3063	2700741	173325	3200153
	(45.99)	(60.68)	(35.66)	(48.72)
2003-04	1075	672019	86916	1356875
	(15.91)	(14.18)	(17.12)	(16.79)
2004-05	3501	3053264	189159	5705805
	(48.07)	(56.79)	(34.17)	(52.42)
2005-06	3501	3753038	219778	6860935
	(46.81)	(60.53)	(34.24)	(52.30)
2006-07	639	381715	50507	584964
	(08.40)	(05.41)	(07.09)	(03.59)
2007-08	619	411212	47447	565831
	(07.65)	(04.76)	(06.55)	(03.07)
2008-09	697	521274	51952	571403
	(08.48)	(04.50)	(06.74)	(02.53)

Note: Agro Non-Food industries NIC code 17, 20, 21, 23, 24, 25, 26, 27, 28 and 29 in 2002-03, NIC code 17, 20 and 21 in 2006-07, NIC code 13, 15, 16 and 17 in 2008-09

Source: Compiled from Various Reports of Annual Survey of Industries.

The table 2 depicts the number of non-food industries constitute 45.99 percent in 2002-3 and it decreased to 15.91 percent and 48.07 percent respectively in 2005-06 it has declined to 46.81 percent. This enterprise data shows declining trend of non-agro food industrial units, again it has largely declined to 08.40 percent in 2006-07 and further has declined by 07.65 percent in 2007-08 and further it grew by -0.83 percent (08.48 percent) in 2008-09.

The invested capital in non-food industries was about 60.68 percent in 2002-03 and it decreased to 14.18 percent by 2003-04. Capital investment in nonfood industries increased from 56.79 percent in 2004-05 to 60.53 percent by 2006-07 and decreased heavily to 04.76 percent in 2007-08 and desperately rose by 04.50 percent in 2008-09.

The employment situation percentage in nonfood industries was 35.66 percent in 2002-03 and decreased hugely to 17.12 percent in 2003-04. About 34.17 percent of people were employed in non-food industries in 2004-05 it marginally increased 0.06 percent (34.24 percent) and 07.09 percent by 2006-7, 06.55 percent by 2007-08, 06.74 percent and 2008-09 respectively.

Gross output in nonfood industries shows decreasing trend and decreased from 48.72 percent in 2002-03 of SSI's in Karnataka to 16.79 in 2003-04 but it shows increasing during 2004-05 by 52.42 percent and it steadily decreased to 52.30 percent by 2005-06 and its percentage has decreased 03.59 percent to 03.07 percent in 2006-07 and 2007-08. It further reluctantly decreased to 02.53 percent by 2008-09. It tells us that, nonfood industries growth was negative during these periods.

Table 3: Non Agro industries of Karnataka (Value Figures in Rs. Lakh; Others in Number)

Year	Units	Investment	Employment	Output
2002-03	1075	672019	86916	1356875
	(16.14)	(15.10)	(17.88)	(20.65)
2003-04	1015	863768	84665	1998452
	(15.023)	(18.23)	(16.68)	(24.73)
2004-05	1094	886775	94285	2512538
	(15.021)	(16.49)	(17.03)	(23.08)
2005-06	1115	1138772	98406	3193314
	(14.90)	(18.36)	(15.33)	(24.34)
2006-07	3662	3580174	260402	7111814
	(48.17)	(50.81)	(36.55)	(43.69)
2007-08	3990	4392175	258212	8104667
	(49.32)	(50.93)	(35.66)	(43.98)
2008-09	2841	4929574	211303	8183268
	(34.58)	(42.64)	(27.43)	(36.23)

Note: Non-Agro industries NIC code 30, 31, 32,33,34,35 and 36 in 2002-03, NIC code 24, 25,26,27,28,29,31,34 and 35 in 2006-07, NIC code 23,24,25,28,29,30,32 and 33 in 2008-09.

Source: Compiled from Various Reports of Annual Survey of Industries.

Table 3 tells about, non-agro industries sharp decrease from 16.14 percent to 15.02 percentages during the period of 2002-03 and 2003-04 and has further constant rate at 15.02 percent in 2004-05. While the non-agro industries growth also declined rate 14.90 percent during 2005-06 and further it has increased to 48.17 percent in 2006-07 and thereafter 2007-08 the non-agro industries unit's percentage also increased to 49.32 percent in 2007-08 and thereafter decreased to 34.58 percent in 2008-09.

As for as capital investment is concerned, the percentage of non-agro based industries growth rate was quite encouraging in case of agro-based industries. It increased from 15.10 percent during 2003-04 to 18.23 percent during the period of 2003-04. While, capital investment also declined from 16.49 percent in 2004-05. It shows negative rate of investment in non-agro-based industries of total SSI's in Karnataka. In meantime non-agro-based industries invested capital increased to 18.36 percent during 2005-06 and further it rose by 50.81 percent, further the capital invested exhibited a declining trend from 50.93 percent to 42.64 percent during the period of 2007-08 and 2008-09 respectively.

The percentage of employed persons in non-agro-based industries in Karnataka was 17.88 percent in 2002-03 and it decreased to 16.68 percent in 2003-04 marginally increased to 17.03 percent in 2004-05 and further it reserved at 15.33 percent in 2005-06. In the meanwhile, time again, non-agro-based industries employment situation rose by 36.55 percent in 2006-07 whereas, employed persons of non-agro based industries in Karnataka as gradually declined to 35.66 percent in 2007-08 and further its percentage has decreased to 27.43 percent in 2008-09. It clearly indicated that, once labour intensive, of the use technology but still there is a scope for increasing employment opportunities by adopting proper policies.

The gross output of non-agro-based industries in Karnataka was 20.65 percent in 2002-03 and it has increased to 24.73 percent in 2003-04, because industrial output also increased that year Govt of Karnataka industrial policies gave incentives

on higher amount of SSI's and has declined to 23.08 percent in 2004-05 and it rose by 24.34 percent and further it has increased to 43.69 percent during 2006-07. The gross output rate has decreased from 43.98 percent to 36.23 percent during the period of 2007-08 and 2008-09 respectively.

Thus, agro-based industries in Karnataka have an important place and share in the employment and production and gross output. Hence, their development assumed more significance from the point of view of the all-round economic development of the State.

Summary of Findings and Suggestions

Agro-based industries play a vital role in the development of India's rural economy, which has been receiving increasing attention from the central as well as state government, in view of its importance to the reconstruction. Agro-based industries require the huge resources mainly from the agricultural sector. The growth of agro-based food industries in terms of units, employment, investment and output went down from 2001-02 to 2008-09. Only in 2003-04, it showed improvement in all characteristics namely number of units, investment, employment and output. In relation to the non- food agro-based industries over the years also decline. But the productivity gap between the agro- based and non agro based industries is getting up over the years. The major reason of this increased disparity lies in substantially more fixed asset per worker in the non- Agro-based as compared to agro- based industry. Even then the agro- based industry still dominates rural manufacturing in terms of all major characteristics

Suggestions for Agro-based Industrial Development

1. The present practice of managing units on the basis of individual proprietorship and partnership has the demerit of making them less accountable to banks and other credit agencies. Besides, they fail to prove their creditworthiness in order to be eligible for receiving loans. At the same time, commercial banks are required to streamline their credit procedures in order to be more borrower-friendly
2. Non-availability of subsidy in time discourages entrepreneurs to undertake productive activities. The Government should take prompt action on this matter.
3. Marketing is a serious problem with many of the agro-industrial units. Presently, marketing is undertaken only through private channels, where a number of intermediaries are involved. The share of the real producer, therefore, gets reduced. We therefore recommend that the state government set up a separate marketing related corporation to handle the purchase and sale of agro-industrial products. The present arrangement of conducting marketing through cooperatives should be further restructured, particularly the accountability and working of cooperatives, need to be improved.
4. The state government may undertake the task of technology pool, and transferring this acquired pool of technology to agro- based industrial units for improving their efficiency and productivity.
5. The state government in order to promote agro- based industries in the state can suitably incorporate some provisions like tax holiday, special incentives and concessions, in the form of sale tax and octroi tax

exemptions, in the ensuing Industrial Policy Resolutions, especially meant for agro- based industries, rescheduling and conversion of short-term loans to medium term loans, and providing guarantee coverage to agro- based industries for raising institutional credit, etc.

6. Agro- based industrial units are required to be brought in main stream of industrialization by creating awareness of modern technology and helping them to adopt in their industries.

Conclusion

From the above pages it can be said that the State of Karnataka is rich in agricultural and mineral resources, and produce different industrial products for domestic consumption and exports. Similarly, the performance of MSMEs in Karnataka state is magnanimous and worth noting. If the central government continues its support extensively, no doubt, MSMEs in the State of Karnataka contribute a lot to the economy, standing in the forefront.

Agro- based industries, in the study district have contributed towards generation of output, income and employment, improving the profitability of the enterprise, and of attaining higher capacity utilization. Such a performance spread over the period of 2002-03 to 2008-09 has certainly made great fillip towards the development of the rural Karnataka economy. While in certain categories, the performance seems to be as anticipated, in other categories, progress does not appear to be promising. Discrepancies in development among agro-based industries are due to the problem associated with each of the categories in course of their operations. In order to enable agro-based industries to contribute largely towards the development of the rural Karnataka economy, there is a need for a through overhauling of the structure, organization and operation of the enterprises on the lines recommended in the present study. It is an acknowledged fact that the scheme of promoting agro based industries will be meaningful if it follows rather than precedes rural development.

References

1. Acharya KT. The Food Industries of British India. Oxford University Press, Delhi, 1994, 159- 271.
2. Alagh YK. Agro-based Industrialization in India in Harish Nayyar and P. ramaswamy(eds), 'Globalisation and Agricultural Marketing', Rawat Publications, Jaipur 1995.
3. Amita Shah. Understanding the Growth of Agro-Processing Industries: An Inter-State Analysis. Indian Journal of Agriculture Economics. 1989; 4:317-318.
4. Bhargava G. The U.S. Agro-Industrial Prosperity Lesson for India for India, 'Capital, 1971, 4.
5. Chandra GK, Gulati A. Performance of Agro-Based Industry in India. Analysing post Reform Advances and Reverse, International Food Policy Research Institute, Washington, DC, USA (Mimeo), 2003, 10-12.
6. Russo A, Borrelli F. Bacopa Monnieri, a Reputed Nootropic Plant: An Overview. Phytomedicine. 2005; 12:305-17.
7. Malhotra CK, Das PK. Pharmacological studies of *Herpestis monniera* Linn (Brahmi). Indian Journal of Medical Research. 1959; 47:294-305.

8. Bacopa monnieri. Monograph. Alt Med Rev. 2004; 9:79-85.
9. Chatterji N, Rastogi RP, Dhar ML. Chemical examination of Bacopa monnieri Wettst: part II -isolation of chemical constituents. Indian Journal of Chemistry. 1965; 3:24-9.
10. Stough C, Lloyd J, Clarke J, Downey LA, Hutchison CW, Rodgers T. The chronic effects of an extract of Bacopa monnieri (Brahmi) on cognitive function in healthy human subjects. Psychopharmacology. 2001; 156:481-484.
11. Vohora D, Pal SN, Pillai KK. Protection from phenytoin-induced cognitive deficit by Bacopa monnieri, a reputed Indian nootropic plant. J ethnopharmacology. 2000; 71(3):383-390.
12. Al-Snafi AE. The pharmacology of Bacopa monnieri. A. A review. International J Pharma Sci Res. 2013; 4(12):75-92.
13. Singh RH, Singh RL. Studies on the antioxidant anxiety effect of the Medhay Rasayan drug Brahmi (*Bacopa monnieri* Linn)-part II (experimental studies). J Res Ind Med Yoga Homeo. 1980; 14:1-6.