Problems and Prospects of Cashew nut Processing Industry

[1] Dr. KRISHNA BANANA, [2] V.VEERANJANEYA KUMAR.P
[1] Asst.Professor., Head of the Department, Department of Business Administration,
Acharya Nagarjuna University Ongole Campus, Ongole.

[2] Reseach Scholor, Acharya Nagarjuna University-Guntur,
Asst.Professor, Department of Business Administration,
St.Ann's College of Engineering & Technology, Chirala

Email - drkrishnabanana@gmail.com kumarspv@gmail.com

Abstract: *Cashew is often regarded as 'poor man's crop and rich man's food'and is an important cash crop and highly valued nut in the global market. The term "Cashew" has originated from the Brazilian name "Acajaiba" and the Tupi name "Acaju" which the Portuguese converted into „Caju" and is commonly known as "Kaju" in India. It is known as "Paragi Andi" in Kerala meaning foreign nut, "Lanka Beeja" in. Cashew is cultivated mainly in the Asian, African and Latin American zones Cashew Often referred to as „wonder nut", is one of the most valuable processed nuts traded on the global commodity markets and is also an important cash crop. It has the potential to provide source of livelihood for the cashew growers, empower rural women in the processing sector, create employment opportunities and generate foreign exchange through exports. The area under cashew cultivation is the highest in India. However, it is not so in the case of productivity, processing and quality. In reality, the Indian cashew industry has a high untapped potential to support the livelihood of cashew farmers, provide numerous employment opportunities and improve returns through global trade. The present work projects the need for important changes to be made in the existing system, so as to find a substantial improvement in the growth of the Indian cashew industry.*

Key Words: *Cash crop, Indian cashew industry, global market, global trade, opportunities, cashew cultivation.*

1. INTRODUCTION:

The Indian Cashew Industry is export oriented and hence called has dollar earning crop of the country. It provides employment to more than 5 lakh people both directly and indirectly, particularly in the rural areas. Although India is largest producer, processor, consumer and exporter in the world accounting for 26.40 per cent and 46.09 per cent of the world production and export respectively . Even though India is importing sizable quantity of raw cashew nut for value addition (processing) in the country. There is huge scope to increase productivity by putting varkas land under cashew plantation and existing local plantation need to be brought under HYVs.

India was the first country to enter the global cashew trade. The country processed about 1.14 million tones of cashew in 3650 cashew processing mills scattered around the country. The number of cashew processing mills shows an increase from 170 units in 1959 to over 3500 in 2015. The industry provides employment to around 0.5 million people and about 95 % of them are women (Anon, 2014). Forty-six per cent of cashew processing is in the organised sector while 54 % is in the unorganised sector. Annual demand on the Indian cashew processing industry is in the order of 1.5 million tones, only a half of which is met by the existing production. To meet the rising demand, India imports raw in-shell cashew from Congo, Tanzania, Indonesia and Thailand (Zheng, 2012). India exports processed nuts to USA, UK, Japan, Netherlands, Australia, Canada and Germany (Directorate-General of Commercial Intelligence and Statistics, 2011).Cashew is of global value and Table 1 shows a summary of the various uses of cashew products and by-products.

2. INDIA AND THE WORLD CASHEW MARKET:

India is among the top producers of cashew nuts, next to Vietnam, Nigeria and Ivory Coast. These four countries contribute to 70 % of the global cashew production. The area under the crop is 4.71 million ha worldwide with a production of 2.75 million tones annually. In 2010, India produced 0.61 million tones of in-shell nuts from an area of 0.92 million ha (NHB, 2010). This corresponds to 17.10 % of the global cashew production from 19.6 % of the global area under cashew cultivation (FAOSTAT, 2010). Major contributions within the country are from Maharashtra (32.3 %), Andhra Pradesh (16.15 %), Orissa (13.7 %), Kerala (10.76 %) and Tamil Nadu (9.8 %), indicating maximum growth of the crop in the peninsular region (Personal communication, 2010). In the context of imports, India is the major importer, particularly from various countries of the African sub-continent.

3. PROBLEMS IN CASHEW PROCESSING IN INDIA:

Cashew nut processing demands high labour and fuel requirements. Though many technologies have been developed, most small and medium processing units follow traditional processing methods. This could be because of problems with technology-transfers, insufficient capital investments, shortage of resources and mere negligence. There have also been concerns about the need to address the safety and healthy working standard requirements of labours engaged in cashew processing. The following sections explain the problems faced in the Indian cashew processing industry.

4. STATEMENT OF THE PROBLEM:

In the beginning cashew was mainly considered as a crop for afforestation. As it can adapt to varied agro climatic conditions, it has become a crop of high economy and commercial value. The cultivation and marketing of cashew nut involve a considerable amount of manpower and hence play a vital role in the economic activities in India. However, in recent years the owners of the cashew nut growers are unable to obtain optimum yield and return.

The coastal states of India are the main cashew producers. Though the production flourishes both in domestic and foreign trade, the problems associated with its cultivation, domestic and export marketing do not permit the growers to reap optimum return and traders do not get reasonable profit. In India, large numbers of middlemen are involved in domestic and export marketing of cashew nut. As there is no organized domestic and export market for cashew nuts, many a time the growers are at the mercy of unscrupulous village traders. Further in the recent past, the export price of cashew nut is widely fluctuated due to changes in foreign market. Therefore, a scientific study to explore the ways and means to identify the problems connected with the production and marketing of cashew nut in order to enlighten the people concerned about the inherent strength, weakness, opportunity and threat becomes relevant and socially significant. The main objective of the article is to highlight the growth and performance of cashew nut production in the various states in India during 1990-91 to 2009 -10. The secondary data were collected from the Directorate of Cashew and Cocoa Development, Cashew Export Promotion Council, Cashew Research Stations, Agricultural Department, Forest Department, District Industrial Centre, Directorate of Horticulture, Directorate of Economics and Statistics and Directorate of Agricultural Marketing.

5. SUPPLY-DEMAND IMBALANCES:

Though India is the leading producer of raw cashew nuts, the country continues to rely on various forms of the commodity from the Middle-East to meet the growing demands. India (58 %), Vietnam (25 %) and Brazil (15 %) dominate the global processed cashew markets (Kyle, 2009). From Table 1, it is evident that there is a 10 fold increase in market value when raw cashew nut is processed to segregate the kernel. Also, subsequently processed product like spiced cashew would fetch about Rs. 1300 per kg,indicating a 17 to 18 % increase in value as compared to raw cashew nut. Apart from the edible portion obtained, Table 1 explains that the processing by product CNSL has a wide scope for several industrial applications (Paramashivappa *et al.,* 2001). Nut butter production is a relatively simpler, yet less performed processed in India.

6. ENERGY LOSSES:

Most cashew processing units continue to involve non-standardized unit operations that result in. Steaming or roasting of raw cashew nuts and mechanical drying of kernels are classical examples. These huge losses of fuel and energy high temperature treatments are indispensible to break the shell and remove the testa. Temperatures ranging from 75 to 200 oC are commonly used in such processes (Trox *et al.,* 2010).During steaming, water molecules penetrate into the shell structure and result in loosening of cell matrix components. Hence, pressure, temperature and time of exposure are critical process parameters. Cutting and shelling operations involve heavy consumptions of energy. This is because of the peculiar kidney-shaped kernel, the presence of a tough outer shell, the reactive CNSL and the brittleness of the kernel (Jain and Kumar, 1997, as cited by Ogunsina and Bamgboye,2013). There is a scope for an overall energy savings of up to 30–48 % (Mohod *et al.,* 2010a). Mohod *et al.*(2010a) also proposed, there is scope for utilization of renewable energy sources such as solar energy and biomass gasification in this sector. Use of modern equipments demand huge investment costs. This is because of the use of conventional, inefficient devices. Fuel used in roasting is in most cases, high– moisture agricultural bio-mass. This may involve the direct combustion of cashew nut shells in furnace or semi–open pits and is characterized by low fuel calorific value and subsequent thermal energy losses.

7. INFERIOR PRODUCT QUALITY:

The work atmosphere of many small-scale cashew processing units is deplorable and unhygienic, leading to inferior quality of cashew nuts, with high levels of contamination. For example, the soiling operation commonly adopted in most rural units prior to shelling (Fig 2), so as to remove the oil adhering to the surface is known to be a potent source for direct contamination of the edible product. High temperatures used to loosen the outer shell can have

adverse effects on heat sensitive bioactive compounds in the kernel. Further, storage of high moisture cashew kernels under adverse conditions would result in aflatoxin contamination, a rising concern in food safety.

- Among recent interventions that could possibly be implemented in India, the ‘‘Flores’’ hand-cracking method developed in Indonesia allows the cashew nut kernels to be separated from the shell by means of a manual cracking device. The cashews produced after a 3 hours mild temperature drying at about 45oC has the testa undamaged, with minimal emergence of CNSL, which could come in contact with the kernel and lower its value. The method also exhibited low levels of reduction of bio-active compounds in the cashew kernel and is considered to be a better shelling process compared with open pan roasting and oil-bath roasting.
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Frequency distribution of sample units according to the problems faced by them **Sl. No.**	**Problem**	**Small**	**Medium**	**Large**	**Overall**
1	Shortage of labour	**1**	**7**	**5**	13(72.22)
2	Bank finance was not readily available	**5**	**8**	**5**	18(100.00)
3	High interest rate of bank	5	8	6	18 (100.00)
5	Graded and good quality raw material was not available	2	8	5	15 (83.33)
6	Non imposition of purchase tax	1	6	5	12 (66.67)
7	Frequent failure of electric supply	5	8	3	16 (88.89)
8	Non availability of skilled labour	4	6	4	14 (77.78)
9	Rate for raw material not as per grade	3	4	3	10 (55.56)
10	Non availability of subsidy from Government	4	-	-	4 (22.22)
11	Heavy investment for purchase of raw-material	2	4	4	10 (55.56)

8. PROBLEMS:

Regarding the problems of processing factories, the bank finance was not easily available and high interest rate of bank have been the most prominent. Shortage of labour, non availability of good quality raw material, frequent failure of electricity, non availability of skilled labour have been the major problems. The frequency distribution of sample units according to the problems encountered is given in Table

Prospects: The Cashew (Anacardium occidentale Linn.) which belongs to the family Anacardiaceae, is an economically important tropical tree crop. It ranks second only to Almond, among the nine tree nuts of importance in the world trade. In India it soon established itself all along the west coast and later in the east coast. For several centuries cashew is merely regarded as a sturdy perennial tree yielding good soft wood and producing a rather delicious juicy apple. Nuts have been thrown as its hard shell contained corrosive liquid. India is the largest producer of raw cashewnut in the world and accounts for 43 per cent of world production. As years rolled the interest in the nut

slowly developed and extraction of kernel is discovered. More and more people world over have been consuming this unique nut, making the cashew an economic product. Cashew nut processing on commercial basis was initially started in Mangalore, in Karnataka. In 1927 the business started in Quilon of Kerala, later it became the centre of trade. In India during 1999 there have been 1132 cashew processing units spread over several states employing 3.5 lakh workers. Cashew kernel is the main product, and shell and testa (husk) are the by-products of cashewnut.

Cashew possesses high economical as well as nutritive value. In spite of it‟s importance it‟s cultivation has not fetched the careful attention of farmers, due to lack of knowledge about standard package of practices, timely unavailability of good quality planting material and inadequate market infrastructure facility. Cashew is seasonal in nature and price fluctuation due to various agencies involved in marketing of nuts is a major problem in this fruit crop. It is therefore, highly essential to standardize the storage methodology and marketing facility for this crop. If carefully attention is paid towards this crop it would support the economy of farmer and the region sustainability for the long life investment. Disposal of fruits involves a long chain of middlemen which reduces the share of producer in consumer‟s price. There is lack of any collective organization among the producers, while village merchant and retailers are well organized. Cashew is an important fruit crop in South Konkan region. It is the major cash crop of this region thriving well under agro-climatic condition of the districts.

Strategy: On the basis of analysis made and its recapitulation, some strategy had drawn for progress of cashew growers and industry. This will useful to see working of the cashew processing units at micro perspective and put them on the path of balanced and rapid development leading to overall development and prosperity in rural areas and consequential reduction in urban problems. Development of this unit on massive scale is essential for bridging up the widening gap between rural and urban areas.

- Even though, establishment of cashew orchard involved high capital cost and long gestation period, the investment is considerably more profitable and economically feasible in HYV orchard than local variety cashew orchard. Therefore cultivators should undertake HYV cashew plantation on large scale.
- It was observed that maintaining a cashew orchard in adult stage is highly profitable, so the farmer need policy support. As per Horticulture Development Programme in the state, new plantation of cashew is to be done by planting grafts of HYVs and new cashew plantation by local varieties should be prohibited.
- Processing unit requires huge amount of raw material and gives around 90 per cent of female employment in the region. The rapid growth of this unit need to be encouraged. In view of this, wasteland in the region need to brought under plantation crops by inducing large scale cultivation and processing operation as well. It is essential also to promote productivity level also. Due to this benefits that could be derived have been import substitution, development of waste land, improvement of ecology, prevention of soil erosion, employment generation etc.
- Grading and sorting of raw nuts should be done at the production site. Since grading in vogue was improper. This could help the processors to procure superior quality cashew nut to recover higher percentage of superior grade cashew kernel. It will also reduce the cost incurred on dry age and facilitate to earn more return.
- All the unit owners are facing the problem of credit. The credit was not available in adequate quantity and at proper time. Because of this problem, they could not purchase sufficient quantity of raw material which was available in nearby area. To overcome this problem, it is necessary to make modifications in lending policy of financing institute. Another important aspect related with credit was that reduction in the interest rate. This may give good encouragement to the industry.
- Low capacity utilization by the cashew processors is hindering the progress of this industry. To overcome this problem, Government may improve electricity supply failure, revise credit policy by way of providing easy credit availability and lower interest rate.
- Co-operative cashew processing units are required to be established in this area for getting additional benefit in income and employment.

9. CONCLUSION:

The cashew nut production in Indian states has been gradually increasing. But sometimes a negative trend and rapid declining have also been noticed over the study period because of poor crop husbandry and rampant disease spread to endemic level which causes completely collapse the production process. Problems due to major pests of cashew and the supply of quality planting material require attentions of research and development departments. Massive area expansion programme and rejuvenation of old cashew orchards of seedling origin, coupled with supply of quality planting material may have the potential to alter the cashew production, processing and exim scenario not only these four states but also the whole country. The policy initiatives towards promotion of cashew growers‟ cooperatives (for procurement of raw nuts, supply of inputs, credit and infrastructure, small scale processing, value addition and marketing), and cashew apple processing will definitely widen the perspective of cashew growers. This

study concluded that cashew nut marketing is profitable in the study area. Market structure analysis suggests that the market does not operate in a perfectly competitive atmosphere. The major challenge to the enterprise is market price fluctuation. The cost price of cashew nut, cost of loading /offloading and cost of fixed items are important variables affecting revenue generated by cashew nut marketers in the study area. Based on this, the study recommends that cashew nut marketers should form registered trade unions through which solution could be sought to the challenges of market price fluctuation, lack of market information as well as lack of market coordination in the study area.

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