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**COMPETITIVE CHALLENGE OF CASHEW INDUSTRY IN ANDHRA PRADESH
(WITH REFERENCE TO PRAKASAM, EAST & WEST GODAVARI DISTRICTS)**

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ABSTRACT

This article made an attempt to review the Competitive Challenge in Cashew industry and the problems encountered by the industry in Prakasam, East & West Godavari Districts of Andhra Pradesh. Based on the observations of the problems, appropriate suggestions are also offered to tone up the performance of the Cashew industry in Andhra Pradesh in general and Prakasam & East & West Godavari Districts in particular. 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 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. This Districts Cashew Industry Process is Second Largest position in India. The present work projects the need for Competitive challenge & Problems to be Solved in the development of the industry, so as to find a substantial improvement in the growth of the Indian cashew industry.

KEYWORDS

Indian cashew industry, cash crop, global market, global trade, cultivation, productivity.

1. HISTORY OF CASHEW INDUSTRY

Cash in cashew seems to reveal that cashews are commercially very valuable processed nuts in the world. The English name cashew is derived from the Portuguese name for the fruit of a cashew plantation, Kaju. In India also, cashew is commonly known as kaju, and was brought by the Portuguese from Brazil during the 16th century. It was first planted in Goa, from where it spread to other parts of the country, and thereafter across to Southeast Asia, and even Africa.

Four centuries ago, when the Portuguese landed on the Indian soil, they brought with them the priceless tree nut, cashew. Cashew came, conquered, and took deep roots across the entire coastal region of India. It found the Indian soil more congenial for its growth than even its homeland—Brazil. Not surprisingly, it soon gained popularity as a cash crop in many parts of the country. But the large-scale commercial cultivation of cashew commenced in India only during the early 1960s. Today, India is one of the largest producers and processors of cashew in the world, and is still seeking new pastures for cultivation in the country. Cashew is presently grown in Kerala, Karnataka, Goa, and Maharashtra along the west coast, and in Tamil Nadu, Andhra Pradesh, Orissa, and West Bengal along the east coast. The products of cashew fruit are cashew apple and nuts/kernels. In Brazil, cashew apple is used in the preparation of jams, as also for the manufacture of soft and alcoholic drinks. In India, cashew apple is extensively used only in Goa to prepare cashew liquor called *feni*.

India is also the second largest exporter of shelled cashew (kernels) in the world, and follows Vietnam. India enjoys comparative cost advantage in not only production of cashew fruit, due mainly to long coastal line of the country that favors cashew cultivation, with apt soil and climatic conditions, but, more importantly, also processing of raw cashews, owing to abundant availability of cheap and skilled labour. To be sure, India may well be regarded as the global leader in cashew processing mainly because of the dexterity of its labour. For, when processed manually, as in India, broken nuts hardly account for 20% of the country's output of processed kernels.

2. LOCATION OF CASHEW INDUSTRY

The cashew processing industry in India gathered momentum through the last over half a century. In the early years, the industry was located mostly in Kerala, which had then over 50% of the cashew plantations in the country. Though the land ceiling legislation restricted the expansion of cashew sowing in Kerala, the demand for cashew nuts grew. Therefore, over the years, cashew cultivation extended to the other coastal states of the country, more particularly in the Prakasam, East & West Godavari districts of Andrapradesh. Several other states too took to cashew cultivation and processing. High Value Added Tax (VAT) of 12.5% in Kerala also fuelled the growth of cashew industry in other states, where such tax was around 2-4% only. No wonder, the number of cashew processing units in the country

increased rapidly from 170 in 1959 to as many as 3,650 in 2005–06, the last year for which the official government data are available. The total capacity of processing units in India was then 15 lakh tons in raw nuts, and the capacity utilization was 75%. Maharashtra alone then had 2,200 units, followed by Kerala 432 units, and Tamil Nadu 417 units. Nearly 84% of the processing units in Andrapradesh were in the small-scale cottage sector. Probably, at present, the country may have around 4,000 cashew processing units, with an installed capacity of about 18 lakh Tonnes. Assuming 75% capacity utilization, as in 2005–06, it appears that around 14 lakh tons of cashews in shell are presently processed in the country. Half of the processing capacity is utilized through domestic supplies, while for the rest the industry depends on imports.

3. INDIAN CASHEW INDUSTRY

India was the first country to enter the global cashew trade. The country processed about 1.14 million tons 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 2008. The industry provides employment to around 0.5 million people and about 95 % of them are women (Anon, 2009). Forty-six per cent of cashew processing is in the organized sector while 54 % is in the unorganized sector. Annual demand on the Indian cashew processing industry is in the order of 1.5 million tons, 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.

4. 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.

5. CHALLENGES OF CASHEW INDUSTRY

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 labors engaged in cashew processing. The following sections explain the problems faced in the Indian cashew processing industry.

5.1 SUPPLY-DEMAND IMBALANCE

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.

5.2 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 a flatoxin 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 45°C has the testa undamaged, with minimal emergence of CNSL, which could come in contact with the kernel and lower its value.

5.3 ENERGY LOSSES

Most cashew processing units continue to involve non-standardized unit operations that result in huge losses of fuel and energy. Steaming or roasting of raw cashew nuts and mechanical drying of kernels are classical examples. These high temperature treatments are indispensable to break the shell and remove the testa. Temperatures ranging from 75 to 200 °C 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 (Bhoi *et al.*, 2006).

5.4 ENVIRONMENTAL ISSUES

In India, many state governments have banned drum roasting of cashew nuts because of its contribution to air pollution. Its economical afford ability is at the price of the ill-effects to the environment. Eco-friendly steam cooking is an alternative. A study claims that the combined use of steam cooking and hand-cum-pedal operated sheller is more cost-effective than other processing systems (Line, 2003). However, the method is not adopted in most units. Also, the thick acrid fume generated during the roasting process pollutes the environment (Azam-Ali and Judge, 2001). With considerations to environmental protection, cashew processing units need to strictly adhere to environmental protection standards which have been approved by the Peer and Core Committee of Central Pollution Control Board (Mohod *et al.*, 2010b).

5.5 HEALTH AND SAFETY ISSUES:

In most cashew processing units, workers face several health problems. Shelling is considered to be the most hazardous section in the process line. Workers squat in rows on congested and unhygienic floors littered with burned nutshells and dust (Fig 4). Female workers are commonly adopted for this purpose. In India, over 82 % are manual-processing units compared with 40 % in Vietnam and 25 % in Brazil. While breaking the shells CNSL oozes out. This caustic oil can cause severe irritation to fingertips and often results in skin burns. To avoid this, workers apply a Layer of oil (commonly coconut oil) and smear ash over skin parts (Fig 5). Very few units Provide hand-gloves for workers. There have also been instances when sharp broken pieces strike the worker's eye during shelling, often resulting in permanent vision problems. Almost 90 % of workers suffer health hazards while employed in such operations.

Several other medical issues such as allergic contact dermatitis, respiratory diseases, cancer, reproductive disorders, lower back pain, stiff neck, pain in the heels, strain on eye muscles, finger pain, numbness and even bleeding from finger nails were reported by those workers (Kannan, 1978). The condition remains same even after 25 years of publication of the work just cited. Medical findings explain that prolonged squatting leads to degenerative tissue changes and functional defects of the musculoskeletal system. In the peeling and grading section also, women workers suffer similar issues in addition to muscular discomfort and cramps. Such working conditions also make them prone to asthma and other respiratory disorders.

5.6 WORKING CAPITAL

Finance is the life blood to any industry. Financial institutions are advancing fixed capital to Cashew Industry in these districts. But capital, rapid technological changes are necessitating the replacement of obsolete machinery by up to date high cost sophisticated machinery. The financial Institutions are not enthusiastic to provide these loans for modernization and are charging high rates of interest. There is need for liberalized provision of replacement loans at cheaper rates of interest. Commercial banks are responsible for advancing working capital requirements for Processing Units in the districts. Processing units have to hypothecate their inventories to get working capital loans. 65 per cent of the value of hypothecated inventories is taken as the limit for providing working capital advancement, which is not sufficient. Many units have become sick due to lack of required Working Capital and support of Financial Institutions. Unless the Government comes in a big way to help the industry, the industry may not survive collapse. So the Government should come to help in a big way. The contiguous areas of East, West & Prakasam account for a major share of India's export of processed Cashew Exports. So, the Government of India should take necessary steps to provide infra-structural facilities. Therefore, to bale out processing units from working capital constraints, it is necessary to raise the working capital borrowing limits.

5.7 SHORTAGE OF RAW MATERIALS

The capacity utilization and prolongation of the period of operation depend upon the size of the crop market. At present, the business of Cashew Industry is linked to the production of the raw cashew materials. Now a days Mostly we are especially cashew industry is depends from foreign exporters. Therefore, market expansion, both internal and external is imperative for improving the profitability of the units. Processing units being small cannot undertake by themselves, the expensive advertisement activities. Therefore, a marketing organization financed by processing units should be created for the purpose. Government can take necessary actions and try to develop crop production in our own state only, at the same time they must concentrate on qualitative production. Due to the seasonal effect imbalances of crop we are not in a position to produce qualitative Production and at the same time large quantum of production.

5.8 MARKETS

Serious efforts should be made to expand external market as processing industry is rapidly increasing throughout the country. Therefore, meticulous care should be taken for ensuring scientific production, packing, boiling and cooling. In order to minimize costs, it is reported that some processing units are not observing scientific methods of packing and cooling. The processing units shall be forced to observe stipulated methods of production, packaging and boiling and cooling as per international standard.

5.9. TECHNOLOGY

Success of any industrial activity depends upon technical efficiency and ethical standards followed in the production process. It is high time for the producers to realize that it is the quality of the product, which attracts consumers that ultimately determine the profitability and prosperity of the industry. Good government policies and honest and efficient administration are essential prerequisites for proper and efficient functioning of any economic system. The existence of honest administration is essential for rapid industrial development in a country. Unnecessary official interference may stall the prospects of industry. The government should positively come forward to lend a helping hand to the industrial entrepreneurs.

6. CONCLUSION

As the demand of cashew nut grows, the area under cashew crops is also increasing. But this trend is constrained. Research and development presently -focuses on implementing good cultivation practices and developing high yielding varieties, pest resistant crops and other technologies to improve the productivity and quality of cashew. In order to balance the gap in supply-demand, India imports various forms of cashew. Cashew industry in the Region of Districts of Andhra Pradesh is a seasonal industry; the Cashew production will be available for few Months only in a year. Cashew Processors' effort to run the Industry throughout the year with the limited stock. India needs to take necessary actions to improve productivity, cultivation practices and food safety standards in the cashew processing sector. Limited data is available on the processing efficiency of different unit operations by manual and mechanical means in cashew processing. There is also a need for an informative survey of other problems in Indian cashew units, so as to re-focus research and development. Such measures will ensure greater value of Indian cashew at the global markets.

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