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GLOBAL STATUS OF CASHEW PRODUCTION AND TRADE: CHALLENGES AND STRATEGIES FOR INDIA TO REGAIN WORLD LEADERSHIP

The cashew tree (*Anacardium occidentale L.*) is an important export-oriented plantation crop supporting the livelihood of farmers and providing employment to rural poor in India. Cashew is believed to be a native of Brazil, from where it has dispersed to different parts of the world primarily for soil conservation, afforestation, and wasteland development. Cashew was introduced to India by the Portuguese between 1563 and 1570 AD primarily for soil conservation along the West coast, where fertile soil were lost due to erosion by heavy rainfall.

Currently, cashew cultivation has assumed a great importance and commercially it ranks second to almond among the important tree nuts in the world trade. The main economic product is the kernel, which is a rich source of nutrients. The whole kernels are consumed directly or after roasting and salting, whereas

the kernel pieces are used in confectionary. In recent times, oil extracted from kernels is also gaining importance. Cashew apple is also edible and it is processed into products like jam and jellies. The cashew juice after fermentation is used in the beverages production. Cashew nut shell liquid (CNSL) is the byproduct of cashew nut processing industry and it is used in insulating varnishes, brake linings, waterproofing of boats etc.

In the early 1920s, world cashew trade started with the visit of representatives of the General Food Corporation to India. Gradually, Indian cashew export expanded to several European countries, particularly to the United Kingdom and Netherlands. By 1941, the cashew kernels export by India had reached about 20,000 tonnes. Since then, the number of cashew producing countries across the world has increased and new producers continue to emerge resulting in expansion of world cashew

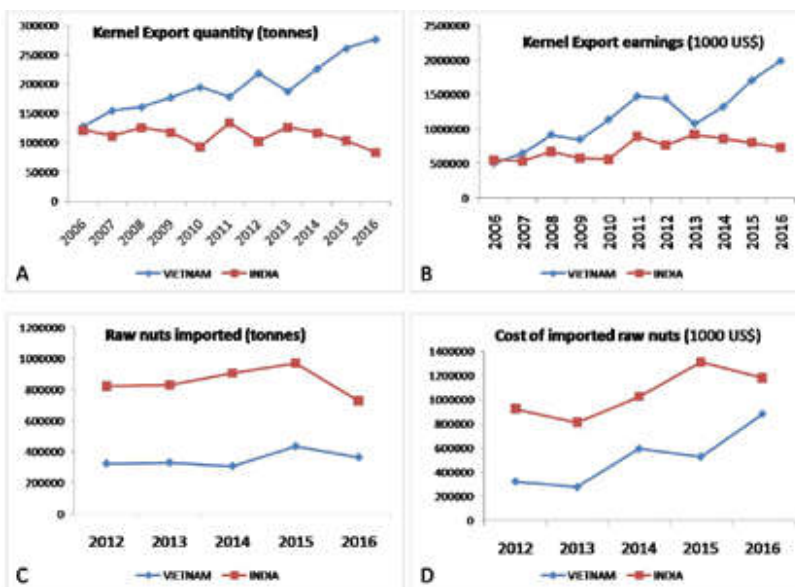


area and trade. Recent trends in world cashew production suggest that the traditional major producers of cashew like India, Côte d'Ivoire, and Brazil are gradually being replaced by newly emerging countries like Vietnam and Philippines. In the last decade, cashew production in Vietnam has shown a sharp rise, whereas in countries like India the growth is almost steady and a declining trend is observed in Brazil.

WORLD PRODUCTION, AREA, AND PRODUCTIVITY

Currently, a total of 33 countries in Asia, Africa, and Americas are commercially cultivating cashew over an area of 6.08 m ha. Among these, Vietnam, Nigeria, India, Côte d'Ivoire, Philippines, Tanzania, Mali, Guinea-Bissau, Indonesia, Benin, and Mozambique are the major producers of cashew. World production of cashew nuts is increasing annually and it has reached 4.89 million tonnes in 2016. Vietnam is the world leader in cashew production and has produced 1.22 m tonnes (25% of world production) followed by Nigeria with 0.96 m tonnes (20% of world production) and India with 0.67 m tonnes (14% of world production). Côte d'Ivoire

A COMPARISON OF QUANTITY AND EARNINGS OF CASHEW KERNELS THROUGH EXPORTS (A & B) AND QUANTITY AND COST OF IMPORTING RAW NUTS (C & D) BY VIETNAM AND INDIA



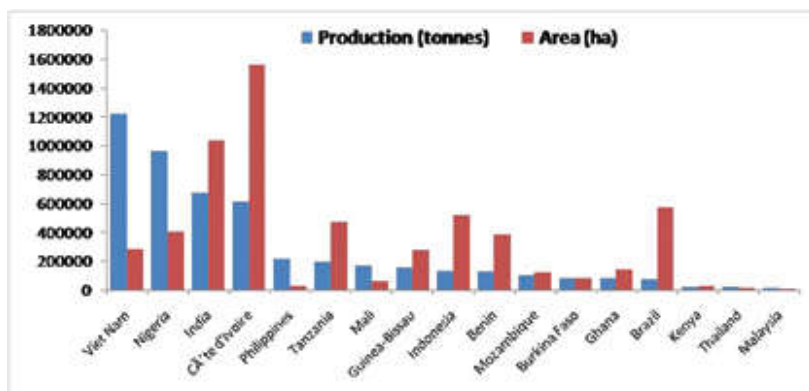
with 1.56 m ha (26% of total) and India with 1.04 m ha are leading countries in the area under cashew cultivation. However, due to poor productivity, the production levels are low compared to the emerging

countries like the Philippines and Vietnam. India stands in 20th position with respect to the cashew productivity with 648 kg/ha. The highest productivity is achieved in S.E. Asian countries like Philippines and Vietnam.

CASHEW TRADE AND INCREASING DEMAND FOR CASHEW

Traditionally, India dominated the international cashew trade and in fact, it was the first country to set up processing industries dependent on skilled labor. Till 2006, India was the world's primary importer of raw nuts, as well as the primary exporter of processed nuts mainly to the USA and European countries. Vietnam overtook India in cashew kernel exports in 2006. Since then, there has been a constant increase in the export quantity and earnings in Vietnam, whereas in India it shows a declining trend with a drastic reduction in export quantity. Currently, the exporting earnings in Vietnam from kernels is

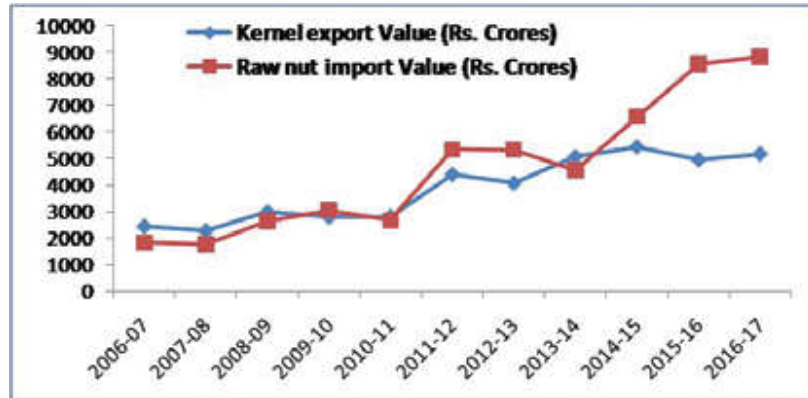
AREA AND PRODUCTION UNDER CASHEW CULTIVATION IN THE MAJOR CASHEW GROWING COUNTRIES OF THE WORLD



about US \$ 2 billion which is almost three times that of India *i.e.*, US \$ 0.7 billion. The reason for an increase in Vietnam's kernel exports is the lower kernel prices compared to India as the processing is cheaper and the domestic consumption of cashew is low in Vietnam.

Further, import of cashew nuts primarily from the African countries has increased in both Vietnam and India over the years. In future, the supply of raw cashew nuts by import into India may be drastically reduced as Vietnam competes with India for the raw nuts and also as the African countries have intended to promote processing in their own countries. Currently, Vietnam has been importing raw cashew nuts from West Africa at a higher price. Furthermore, foreign exchange spent on import of nuts by India has significantly exceeded the earnings from the export of kernels. Further, global per capita cashew kernel consumption has increased from 0.072 kg/year in 2007 to 0.106 kg/

AREA AND PRODUCTION UNDER CASHEW CULTIVATION IN THE MAJOR CASHEW GROWING COUNTRIES OF THE WORLD



year in 2016 suggesting about 47% increase. In India, the per capita cashew consumption has increased by about 5.5 times *i.e.*, from 0.041 kg/year in 2007 to 0.228 kg/year in 2016. In the year 2016, the demand for cashew kernels has increased by 7% suggesting increased demand for cashew. These facts reveal the need for enhancing domestic cashew nut production to meet the demands of the local processing industries for meeting the local demand for cashew products and expanding

exports.

CHALLENGES AND STRATEGIES FOR ENHANCING CASHEW PRODUCTION IN INDIA

In India, the productivity and area under cashew cultivation have remained the same over the few years. Although India is the largest processor of raw cashew nut, it produces only 50% raw cashew nuts for processing and hence, depend on imports from African and



A view of ultra high density planting in cashew

other countries to meet processing capacity. In near future, as the African countries envisage starting their own processing industries, import of raw cashew nuts to India may gradually decline. Currently, domestic consumption of cashew is increasing by 15-20% every year and the raw cashew nut requirement of the country is estimated at 40-50 lakh tonnes or even more by 2050 AD. Therefore, there is a pressing need for enhancing the domestic cashew production to bridge the huge demand and production gap.

The major constraints for cashew production are the low yielding varieties, insect pest damages and the poor management of crop. To address the issue, appropriate strategies include expanding area under high yielding varieties to potential non traditional cashew growing regions, wastelands etc., replacing the old senile and seedling raised low yielding plantations with high yielding cultivars graft, and also increasing productivity by adopting advanced cashew production technologies such as use of quality planting materials, high and ultra-high density planting, integrated management of tea mosquito bug and cashew stem and root borers, integrated nutrient management, drip irrigation, canopy management, appropriate soil conservation measures.

The government of India has planned to expand the area under cashew cultivation by 1.20 lakh hectares in the next three years in 13 states. Of this, the expansion of cashew crop on 60,000 ha in the current year is in the North-East States such as Tripura and Meghalaya, and in Jharkhand, Chhattisgarh, Gujarat, Karnataka, Tamil Nadu, Andhra Pradesh and Odisha states.



Supply of quality planting material, demonstration, and dissemination of cashew production technologies and financial support for initial establishment and maintenance and also information on marketing opportunities will encourage farmers to take up cashew cultivation. Currently, there is a shortage of quality planting materials for cashew area expansion as the production of planting material is season dependent. Another major hurdle in plantation crops like cashew is the low replacement rate of low yielding old cultivars with new high yielding cultivars due to low multiplication rates and an unwillingness of farmers to remove old plantation as new establishment needs initial investment and the regular income from plantation will be stopped for 4-5 years. The supply of good quality planting material can be met by developing efficient tissue culture based propagation methods which will not only allow rapid multiplication of lakhs of plants from a small amount of plant material but allows a year-round supply of disease-free planting material. Further, farmers

could be encouraged with monetary benefits and providing advanced cashew production technologies.

Vietnam exports cashew at a much competitive price compared to India as processing costs are lesser in Vietnam. Therefore, to compete in the international cashew market and regain its dominance in cashew trade, productivity needs to be enhanced and processing costs need to be reduced in India. To address the trade issues, improved mechanization of processing, product value addition and diversification, by-product utilization and post-harvest management of cashew nuts and apple is required.

Cashew has attained great economic importance and is currently the second most important tree nut. Over the years the global production and international trade have changed with new potential players entering the cashew market. Cashew brings foreign currency and is considered a key crop that could potentially support the livelihood of local communities and empower the most vulnerable groups in rural areas. ■