

The Great Cashew



Cashew production is
the main weapon
of earning foreign currencies



Billions of dollars
near to
hands.....

Production, collection, storage, processing, export and ability,
present situation and possibilities of cashew in Bangladesh.



Bangladesh Organic Products Manufacturers Association (BOPMA)



Agro Products Business Promotion Council (APBPC)

Ministry of Commerce

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Introduction

Under the dynamic leadership of Hon'ble Prime Minister Sheikh Hasina urged, there is no alternative to the implementation of Vision-2041 to increase the production, processing and export of agriculture and agricultural products comprising to other sector sectors. There is a huge demand of cashew in the global market and it is increasing day by day. Cashew is in the third position among the fruits trading and is in the first position of nuts trading. Bangladesh can easily earn a lot of foreign currencies by entering into the global markets through producing and processing of cashew. Cashew can be added as a new success of the government in the field of agriculture.

Cashew is a very delicious and nutritious food. Its commercial importance is unlimited. Cashew is the fast growing, environmentally friendly and economically very profitable fruit among the various fruits produced in the country. It does not require much fertile land for cultivation. Cashews can be grown on both sides of roads, highways and railways, on hills and on all highlands. It is important to plant cashew to protect hill side and landslide.

Not only just as cashew kernel, but there is also a commercial importance of shell. The oil produced from the shell can be used as high quality bio-pesticides, which is very essential for safe crops and safe foods production. Cashew apple juice is very popular nowadays in the world. Besides much more nutritional values, it contains 6 times Vitamin C than orange. After extracting juice from the cashew apples, the residues can be used as organic bio-fertilizer. On the other hand, cashew trees absorb thousands of tons of green house gases (carbon dioxide, carbon monoxide etc.) As a result, cashew is a profitable agricultural product in all aspect.

The climate and weather of our country is suitable for cashew production. There is good possibilities for cashew production in Hilly districts, Barind areas, Sylhet, Rangpur Division, Sherpur, Tangail, Mymensingh, Gazipur, Panchagarh, Nilphamari districts. The country will be developed economically if cashew is produced widely in these areas. The country will be rich if the processing industries are developed immediately. Besides, lot of manpower is required for producing and processing of cashew. Specially this sector will contribute to rural women promotion, rural income generation and poverty reduction.

At present about 3.5 million tons of cashew is produced worldwide. The highest production is in the West African country, Ivory Coast, Nigeria, Ghana and Benin. The Cashew market size is 9.8 billion dollars worldwide. Vietnam exports 4 billion dollars out of this alone. The rest of the quantity is exported by India and by some West African countries. The largest buyer of cashew is the USA and the European countries. It is also widely cultivated in Kerala, India.

We must not be in the garments sector only. We must export different products. Cashew can be an alternative of the garment industry. It can be an exceptional export sector. Once, cashew was not produced in Vietnam. Now, cashew is very potential and is being produced commercially there. The agriculture needs to be commercialized for sustainable agriculture development. Agricultural development is possible through modern agricultural mechanization and agricultural diversification.

The Ministry of Agriculture is providing training and assistance programs to farmers in the field level to increase cashew production on fallow lands. The Ministry is also providing policy support to the entrepreneurs of the processing industries. Massive activities are being taken to produce and process cashew. Cashew production and cashew industries will play a big role in the country and it is expected that it if the factory is rebuilt as per the plan. We can expect good result earning foreign currencies if we produce and establish industries with good planning.

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Minister
Ministry of Agriculture
Government of the People's Republic of Bangladesh



Message

Bangladesh is self-sufficient in food grains due to the dedicated efforts of the present agro-friendly government under the dynamic leadership of Hon'ble Prime Minister Sheikh Hasina. In agriculture, the main goal of the government is to trade subsistence agriculture and to make it profitable. Henceforth, the basic importance has given to increase the production and processing of non-conventional crops like, cashew, coffee, dragon fruit, black pepper etc.

Cashew is very delicious and nutritious food. The cashew is fast growing, environmentally friendly, economically profitable plant. The climate and weather of Bangladesh is very suitable for cashew production. There is good scope producing cashew in the hilly, Barind region, Sylhet, Panchagarh and Nilphamari district. Cashew can be produced on all highlands, khashlands, fallow lands of the forest department, pond side, both side of rail and roads easily.

Besides, lot of manpower is required for producing and processing cashew. Specially, there are lot of job facilities for the unprivileged women. Thousands of unemployed people will get jobs in the cashew production and industry sectors and the unemployment problem will be solved from the country.

There is a very big demand of cashew in the international market and it is increasing day by day. Vietnam exported 450000 tons of cashew kernel to the USA worthing US\$ 3258 million in 2019. It is possible to earn huge foreign currencies like Vietnam if we produce cashew on the lands of stated areas and process imported raw cashews by adding values.

I thank to the Bangladesh Organic Products Manufacturers Association (BOPMA) as the BOPMA has come forward to produce, process and to market cashew globally. The government will cooperate the BOPMA in this regard.

I applaud the initiative of BOPMA to publish the memoirs about Cashew. I hope that, cashew production and processing industry will play a major role and will capture the place of major cash crop and main exportable products in the country very soon.

Joy Bangla, Joy Bangabandhu.
May Bangladesh live forever.

Dr. Muhammad Abdur Razzaque, MP



Minister
Ministry of Commerce
Government of the People's Republic of Bangladesh



Massage

Cashew is very delicious and nutritious food. The cashew is fast growing, environmentally friendly, economically profitable plant. Cashew is in the first position in the international market. The climate and weather of Bangladesh is very suitable for cashew production. There is good scope producing cashew in the hilly, Barind region, Sylhet, Panchagarh and Nilphamari district. Cashew can be produced on all highlands, khashlands, fallow lands of the forest department, pond side, both side of rail and roads easily.

On the other hand, there is a great scope to earn huge amount of foreign currencies by exporting of Konjac and Konjac powder.

Lot of manpower is required for producing and processing cashew. Specially, there are lot of job facilities for the unprivileged women. Thousands of unemployed people will get jobs in the cashew production and industry sectors and the unemployment problem will be solved from the country.

Cashew and Konjac production requires a lot of manpower. So, thousands of people including neglected women will work and the country's unemployment problem will be solved.

There is a big demand of cashew in the global market and it is increasing day by day. In 2019, Vietnam exported 450,000 tons of cashew to the United States and its value was 3258 million US Dollars. We can also earn about 1200 million US dollars or about 10 thousand crore taka annually by exporting six lac tones of raw cashew / 1.5 lac tons cashew kernel, from 2 lakh hectares of fallow land.

On the other hand, Japan imported about 120000 tons of Konjac powder in 2019 worthing 1000 million US Dollars or about 8500 crore Taka. I hopping that cashew and konjac are going to be the major exportable items within next five years.

I am hopeful that, cashew and konjac and industries of these 2 crops will be country's major cash and exportable products.

Joy Bangla, Joy Bangabandhu.

Tipu Munshi, MP



Secretary
Ministry of Commerce
Government of the People's Republic of Bangladesh



Message

Agro Products Business Promotion Council (APBPC) was established in 2011 under the Ministry of Commerce supporting financially and policy to publish and promote agriculture and agro processed products export. Recently, agriculture and agro processed products is playing an important role in export business in Bangladesh. Presently the cashew has obtained popularity among the consumers. This sector can increase a lot export earnings can create thousands of jobs by obtaining the capability on quality production of cashew, processing and export. In the implementation of Vision-2041 under the dynamic leadership of Hon'ble Prime Minister Sheikh Hasina, there is no alternative to increase the production and export of agriculture and agro products like other sectors. It is possible to meet the demand of the country and abroad by producing Cashew in other vacant areas including the hilly areas of the country. Agro Products Business Promotion Council (APBPC) of the Ministry of Commerce will provide all kinds of assistance for the development of Cashew and the implementation of the program will be further strengthened.

I hope this publication will play an important role in the development of cashew at all stages.

Dr. Md. Jafar Uddin



Co-ordinator
Business Promotion Council and
Additional Secretary
Ministry of Commerce
Government of the people's Republic of Bangladesh

Message

Agro Products Business Promotion Council (APBPC) under the direction of the Ministry of Commerce has under taken training programs for quality production and processing of cashew as a new product in the export basket for export diversification and is implementing various development programs. In its continuation, the publication has been done by the Bangladesh Organic Products Manufacturers Association (BOPMA) in collaboration with the Agro Products Business Promotion Council (APBPC) having the aim of raising awareness about the quality of production, processing and export potential of cashew and wide spread of this production. The Agro Products Business Promotion Council (APBPC) under the Ministry of Commerce was formed in the light of export policy. The Agro Products Business Promotion Council (APBPC) has been working with the Bangladesh Organic Products Manufacturers Association (BOPMA) since 2011 in the development of agriculture and agro processed products. The Agro Products Business Promotion Council (APBPC) will work for the development of product quality for export and fulfillment of conditions related to compliance and standard creation of new export market environmentally friendly production and addition of new products etc. and will provide overall support for the development in the sector.

I am hopeful, this publication will be very informative and useful on quality production, processing and export of cashew.

A.H.M. Shafiquzzaman



Director
FBCCI and
Chairman
Bangladesh Fruits Vegetables and Allied Products
Exporters Association of Bangladesh

Message

I am very much glad to hear that the Agro Products Business Promotion Council (APBPC) and the Bangladesh Organic Products Manufacturers Association (BOPMA) are jointly going to publish souvenir on cashew production and development of cashew industries.

Recently, Hon'ble Prime Minister in her address to the nation urged to solve the Covid-19 problem by establishing more and more agro and foods industries sector to replace the garments sector. We are encouraged by her order and going forward to produce, process and export world's most delicious, nutritious and expensive food cashew.

There is good scope producing cashew in the hilly, Barind region, Sylhet, Panchagarh and Nilphamari district. Cashew can be produced on all highlands, khashlands, fallow lands of the forest department, pond side, both side of rail and roads easily.

Cashew sapling starts fruiting within one year of plantation and fruits are collected at 3rd year. I am optimistic that in the next five years the cashew and the cashew industries are going to be major agricultural and exportable item in Bangladesh.

S. M. Jahangir Hossain



Vice President

The Cashew Growers Processors and Exporters Association of Bangladesh

Message

I am very glad to hear that Agro Products Business Promotion Council (APBPC) and Bangladesh Organic Products Manufacturers Association (BOPMA) are jointly going to publish a souvenir on cashew production and cashew industries.

Chattagram, Bandarban, Rangamati, Khagrachhari, Barind region, Sylhet, Rangpur division, Sherpur, Tangail, Mymensingh and Gazipur districts have great potential for Cashew cultivation. Recently, Hon'ble Prime Minister in her address to the nation to solve the Covid-19 problem by alternative ways. We have responded to her call by encouraging the production, processing and export of the world's most delicious, nutritious and expensive food Cashew. The Cashew Growers Processors and Exporters Association of Bangladesh (CGPEAB) has decided to produce and export more cashew.

We have already cultivated Cashew in 13000 hectares of land across the country and we have 4000 members. Our goal is to export 6 lac tons of cashew nut or 1.5 lac tons of Cashew Kernel from 2 lac hectares of fallow land by 2030 and bring about 1200 million US Dollars or about 10 thousand crore export income to the country.

Cashew can be cultivated easily and fruits come within one year of plantation and fruits are collected from the third year. I am optimistic that in the next five years the cashew crop and the industry will be an alternative export hub. Moreover, thousands of women workers will be employed in this sector which is a priority program of the present government.

Syfuddin Hasan



President
Bangladesh Organic Products
Manufacturers Association (BOPMA)

Message

Cashew is a most delicious and nutritious food in the globe. That's why it is called the poor men's crop and rich men's food.

This cashew has been being produced in Bandarban, Rangamati and in Khagrachari districts for many years. Until 2013, it was a neglected crop. Farmers did not get the proper price. As a result, many farmers destroyed their orchards.

The Bangladesh Organic Products Manufacturers Association (BOPMA) and Agro Products Business Promotion Council (APBPC) have been giving trainings to the farmers, processors and the exporters. As a result, cashew has become a valuable and cash crop now. We produced 3500 tons of raw cashew in 2020 and we exported to India and to Vietnam. Our goal is to produce 10 lac tons of raw cashew on 2 lac hectors of land to earn 1000 million US Dollars or 8500 crore taka.

Many of BOPMA's member organizations have set up cashew purchase centers in different upazilas of Bandarban, Khagrachhari and Rangamati districts. The farmers are getting good price from those purchasing centers. I am requesting the Agro Products Business Promotion Council (APBPC) to cooperate us more developing this sector.

There are many important and eco friendly products can be produced from cashew. I hope that the cashew and the cashew industries will contribute a lot as cash crop and as well as exportable ffds developing the economy of the country very soon..

The major buyers of Cashew are USA, Europe and many countries of Middle East. It is predicted that the cashew market may be increased upto 1300 crore US\$ by 2024. There is a possibility to increase the market in the USA only upto 5.520 crore US\$ and it is increasing in the European market simultaneously. Bangladesh can easily become a partner in this market by producing Cashew in the fallow lands of hilly, Barind region including Sylhet, Sherpur, Tangail, Panchagarh, Thakurgaon and Nilphamari districts. The EU countries import cashew more from the developing countries. It is a great scope for Bangladesh.

Mu. Abdus Salam



Bangladesh Organic Products Manufacturers Association (BOPMA)

Bangladesh Organic Products Manufacturers Association (BOPMA) is an exceptional business organization that assists in the conservational overall management of organic product processing across the country. The main objective of this organization is to promote and expand organic business nationally and internationally in the interest of soil, fisheries, public health, farmers, production and traders.

Organic agriculture is an ideal and sustainable method by which the soil is always fertile and organic fertilizers are used instead of chemical fertilizer in agriculture. Organic fertilizer and pesticides management in organic agriculture which is an advanced technology for our overall food security and sustainable agriculture. Therefore, in order to implement environment friendly agriculture methods, special emphasis should be given on organic agriculture. In this case, there is no alternative to organic farming.

Agriculture to the production of food grains, the use of chemical is rampant at various levels. As a result, about 2 lac people being attacked by cancer every year including innocent children. Millions of people are currently suffering from various complex diseases and according to research report, the quality of food poisoning is the main cause of it. The number of new hospitals is increasing every day which is costing a lot of money for medical treatment. Bangladesh Organic Products Manufacturers Association (BOPMA) was established to overcome these situations. The Association has been working tirelessly for safe food production, processing, marketing and export.

Goal and objectives of the Association :

1. Establish organic farming management.
 - (a) The soil will produce healthy and nutritious crops;
 - (b) Food security will be strengthened as agriculture management yields 15-20% more;
 - (c) A healthy nation and country will be established;
 - (d) Subsidies on fertilizers and agriculture will be saved.
2. To establish one organic fertilizer factory at each upazila of the country.
3. Assist in setting up of one organic pesticide factory in each zila.
4. To provide assistance establishing one safe alternative food factory in each upazila.
5. Assist in setting up of a vegetable and fruit processing and preservation factories at each upazila.

6. To give ideas & training to the farmers about the benefits of organic farming.
7. Inform the public about the health benefits of organic food.
8. Ensuring higher yields and sustainable food security through alternative agriculture.
9. Assist in setting up multiple laboratories in Bangladesh to ensure non toxic food.

Number of members of BOPMA

1. Farmer : 16000
2. Producer : 160
3. Processor : 40
4. Exporter : 24

Bangladesh Organic Products Manufactures Association (BOPMA) is providing various types of assistance & training to farmers & entrepreneurs in the production of much needed nutritious crops.

The Hon'ble Prime Minister has repeatedly called for the establishment of 100% exports oriented agriculture and food industry as an alternative to the garments industry. We are creating entrepreneurs to establish essential, new, modern, innovative and genuine agro & food industries those are essential both in the domestic and global markets implementing her order.

Contact with Bangladesh Organic Products Manufactures Association (BOPMA):

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Agro Products Business Promotion Council (APBPC)

In Accordance with the government's export trade policy, Agro Products Business Promotion Council (APBPC) was formed in 2011 under the Ministry of Commerce as a joint venture between the government and the private sector to reinvent the new export baskets and diversify the market. The Council is implementing various training programs, awareness workshops and seminars, market development and expansion, technology development and various programs with the Associations of Agricultural Processed Products on various aspects of compliance in order to improve the quality and productivity of the related industrial products.

In order to survive in the current competitive international free economy market, it is essential to build international standards and compliance issue for agriculture and agro processed products. The issue of compliance has become a major challenge in the agriculture and agro-processed products industry as per the demand of big buyers in the developed countries of the world. Different buyers in the developed world are always considering the issue of compliance of agriculture and agro-processed products. The more importance is given to this issue, the position will be the stronger of agriculture and agro-processing industry in the international market. The APBPC is working to create awareness and take effective action in this regard.

Mission and Vision of the council :

A. (A) Local products manufacturers and exporters will ensure competitiveness in the global markets to increase national export volume by reducing single product dependency by the agro and agro processed products export multiplication (adding new products to the export baskets and multiplying the global markets).

B. To develop the efficiency and speediness of both local and global business by recognizing and removing the supply barriers of raw materials of the agro and agro processed products and to increase export of quality products, attractive packaging following international compliance factors, high value added products production, initiatives for creating markets. To publish Agro products, technology, marketing facilities, necessities etc. related required knowledge gathering, collection and publication necessary steps should be taken to contribute more in the national economy. To work with the government, semi-government, private and international organizations for industrial facilities by participatory methods.

C. Aiming to add new products in the export baskets and to multiply the global markets the Agro Products Business Promotion Council is implementing the following activities-

01. Training program on environment pollution and compliance, 02. Preparation of documentary, 03. Development policy assessment and reaction report submission, 04. Acceptance of policy advocacy activities, 05. Efficiency development and ability development, 06. To organize training program on development of quality products and good management practice, 07. To organize awareness workshop and seminar on different issues, 08. To take different initiatives for developing the efficiencies and abilities of the women entrepreneurs, 09. To train to diversify the conventional business to e-commerce, 10. To support participating in the local and global development fairs, facilitating outgoing and incoming international trade delegates simultaneously.

Therefore, the Agro Products Business Promotion Council is executing all the activities successfully those are run by different foreign donors, donor organizations and government.

Relevant Association to Agro Sector of Bangladesh active with APBPC:

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Brief history of cashew

Anacardium species trees are seen in the north-eastern Brazil. In this reason, Johnson declared Ceara province as the land of origin of cashew in 1973. Cashews are grown plenty in Brazil now a days also. The Portuguese discovered cashews in Brazil in 1578. They expanded cashew production in the East Africa, West Africa and in the Indian sub continent. As per the historicists, the cashew production was started along the coastal area Cochin in Goa. But as per the other historicists, cashew production was started along the Malabar coastal area in India in sixteenth century. It was expanded from there to different places in the Indian sub continent. It is mentionable that the cashew was not planted for fruits and kernel in the beginning. The cashew plantation was simply started for protecting erosion, forestry development and to bring the fallow lands under cultivation. Plenty of cashew is produced now a days in Vietnam, Cambodia, India, Indonesia, Malaysia, Kenia, Mojambic, Tanzania, Madagascar etc.

Starting and expansion of cashew in Bangladesh

It is about 30-35 years before Hill Chittagong Development Board and Horticulture Development Division (now Department of Agricultural Extension) jointly distributed land and cashew saplings freely to the Kaptai Embankment affected farmers for their rehabilitation and development. At one stage, the cashew trees started giving fruits but there was no processing technology and market. Very few quantity of cashew was processed manually and traditionally only in Rangamati and very big quantity remained unsold. Cashew production was absolutely a loosing sector as a result the growers became discouraged and destroyed many gardens. Later some exporters started exporting raw cashew to India, Vietnam and to Thailand in very small scale. Bangladesh Organic Products Manufacturers Association started to work and organized many training programs, seminars with the keen supports Ministry of Commerce and Ministry of Agriculture. As a result, the growers are now very encouraged and interested and they started to produce, collect and to store cashew through modern technologies.

In this case, cashew market price became much higher and the growers get more money. Recently many initiatives have been taken on production and processing. Different research institutes, BADC and the private entrepreneurs along with the Ministry of Commerce and the Ministry of Agriculture are proceeding forward in this regard. The progress is going on rapidly. Hopping that, we will enjoy our own cashew kernel very soon.

Introduction to the cashew tree

Reason of naming

The word Cashew is from the Portuguese word ‘caju’. Its pronunciation in Portuguese is Ka’zu. This wording is from Tupi India word ‘A-caj’. Its meaning is nut is produced from itself. The generic name of cashew ‘Anacardium’ is from Greek language. ‘Ana means outside and ‘cardium’ means position. So, its true meaning is outside position since the nut hangs outside of fruit instead of inside.

Cashew tree

Cashew is an evergreen and long-life tree. It becomes about 14 meters long. Its size is not same everywhere. It spread lot of branches surroundings. Its leaves are quite big and about oval shaped. Cashew leaf is 4-12cm long and 2-15cm with. Cashew is normally 2 species, giant specie is more and available out of two. Height of this specie is 15 – 45 feet. Canopy space on the tree is 36 – 42 feet. This canopy spacing sometimes may be 60 feet.



Cashew Tree

Plant information

Cashew is from the Anacardiaceae family. There are 60 – 70 generas in this family. Henceforth, there are 400 – 700 species of this generas. Our popular fruit mango and pistachio are from the same family. The main character of the Anacardiaceae is, one kind of chemical, resin is available at the branches or in the wood. Besides, resin comes out from the leaves, flowers and from fruits. Anacardiac Acid is avail in the resin, which is responsible for skin diseases.

Scientific Classification

Kingdom	:	Plantae
(Unranked)	:	Angiosperms
(Unranked)	:	Eudicots
(Unranked)	:	Rosids
Order	:	Sapindales
Family	:	Anacardiaceae
Genus	:	Anacardium
Species	:	A.occidentale
Binomial name	:	Anacardium occidentale L.



Cashew Tree

Flowering

Leaves come out with flowers during budding time after dry season. The tree is covered by flowers and fruits and as flowerings are at the topmost position of the branches. Both male and female flowers start at time together. But lot of male flowers is seen in the first stage. Fruit sticks become about 25cm. The flowers are become very small and at the first stage they become light green and later on they become reddish. The pollination system is done by the insects naturally. Fruiting starts 6-8 weeks after pollination.



Bisexual Flower



Female Flower



Male Flower

Cashew apple and nut

The cashew apple is just pear shaped. Cashew nut hangs at the end of the apple. The whole cashew apple is edible since the nut stays outside the apple. Cashew apple is juicy and spongy. The apple is smaller than nut when it is tender. About 15-20 days before ripening, the apple is quite large and become bright red color. The apple becomes in different colors such as red, yellow, pink etc. The ratio of nuts to apple by weight is about 1:10. The size of the nut is curved which looks like a kidney.



Cashew Flower



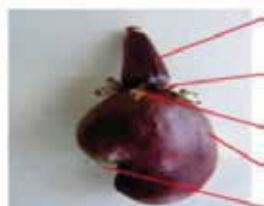
Structure of Cashew



Young Cashew Nut



Raw Cashew Nut



Mature fruits of different colors including cashew nuts.

Cashew apple

Cashew apple is on the top of the apple. We can get 80% juice from cashew apple which is very nutritious and medicinal. Each 100 gm of fruit contains about 26 ml of vitamin C which is about 5-6 times more than orange and is extremely helpful for digestion. This apple is used to make a variety of foods such as cashew apple juice, syrups, pickles, jams, jellies, sauces, drinks, wine, spirits, vinegar, etc. In some places this fruit is used as cattle feed. Cashew liqueur works well in illness, cold, flu, toothache, body aches, low-blood pressure, sleep disturbances in adults and diarrhea. It is possible to overcome the deficiency of vitamin C of the people of the country with cashew juice produced from cashew apple.



Cashew Apple

Cashew kernel

Cashew nuts are 3-5 cm in length and weight is up to 5-20 grams. Fruit stems and inflorescences swell to form pear-shaped cashew apples. Cashew apple is a fragrant and succulent fruit. There is only one seed under the cashew apple, which is known as cashew. This Kernel is contained in a two-layered shell.



Cashew Nut



Cashew Kernel



Nutritional value of cashew

In terms of food quality, cashew is very nutritious and healthy. Cashew Kernels contain 21% protein, 48% fat, 22% sugar, 2.4% minerals, 0.45% phosphorus, 0.55% calcium and each 100 grams of Cashew contains 5 milligrams of iron, 730 milligrams of vitamin B-1 and 110 milligrams of riboflavin. There are many other beneficial phytochemicals including sugars, carbs, fats, minerals, vitamins which are beneficial for health. The table below shows the nutritional value of cashew:

Sl.	Nutrition Fact	Quantity (%)	Sl.	Nutrition Fact	Qty mg (Per 100gm)
1	Protein	21	5	Iron	5
2	Fat	47	6	Vitamin B-1	730
3	Carbohydrate	22	7	Riboflavin	110
4	Minerals	2.4	8	Phytochemical	Lot of

Leaves

Cashew contains about 23% tannin which is used to color fish nets. In local treatment young leaves are used in diarrhea and piles disease and in making tooth powder. Old and dry leaves are good as mulching. Because leaf rot is used as an excellent organic fertilizer.



Leaves of Cashew Tree

Tree bark

The bark of the tree contains 9-12% tannin which is used to process leather in tanneries and to make marking inks. Yellow gum from tree bark is an obnoxious element for insects.

Wood of the tree

Refreshing beverage is made from fresh tree trunks. Moreover, a kind of varnish can be made from its stem. This wood is used in the centering work of building construction and wood coal can be made from it. Although cashew nut wood is not very expensive, it is used in packing boxes, boat making etc. The wood is used to make brake linings and clutch disc linings for motor vehicles.



Wood and Bark of Cashew Tree

Cashew production method

Weather and climate

Cashew is a tropical tree. It's mostly grown on both sides of the longitude line i.e. 230 degrees north and 230 degrees south. Cashew trees are also grown at 1500 meter above sea level. It is a very tolerant and drought resistant tree. This tree likes a lot of sunlight and cannot tolerate shady places or cold. Cashew trees can survive in extremely high temperatures. However, there is a risk of falling fruit pods in excess temperature at the time of cocooning. Snowfall causes severe damage to trees, especially in the case of seedlings. Annual rainfall 1000 mm. even if it is less than this tree can survive. Temperatures of 200-300 centigrade are ideal, but an average monthly temperature of 270 is most appropriate. However, the average annual rainfall in all those areas is 1000 mm. to 2000 mm. Cashew is very good to cultivate there.

Although cashew nuts are grown in different places and climates, high rainfall and cloudy weather adversely affect yields. Due to cold, flowering is delayed more than usual. In places where it rains all year round, the tree flowers and bears fruit after a certain period of time. Where once a year there is a clear drought or dry season, the tree flowers and bears fruit once after the dry season. In places where 2 droughts or drought conditions are clearly seen in a year, flowers and fruits are seen to be produced twice in the same year. Flowering time depends on the weather and variety. However, flowering can take about three to four months. After the monsoon, it stays dormant for some time and then flowers appear on the tree. However, the flowering of the tree depends on the temperature.

Land selection

Cashew is an important crop that can be grown in low quality soils, especially sandy soils, which is not possible with other fruits. Although it can grow in different types of soils, well-drained sandy loam soils are more suitable for getting the highest yield. However, cashew garden cannot be created in waterlogged areas.

Variety selection

Seedlings of improved varieties of Cashew nuts should be selected and planted. The size of Cashew nuts is small 2-3 grams, medium 5-6 grams and large 8-9 grams. In our country, Cashew tree has 1-2 fruits per bunch. When planting Cashew nuts, quality and improved varieties of seedlings must be planted. It is best to plant quality Cashew grafting seedlings that are large in size and yield good. If that is not possible then seeds should be collected by selecting mother plants that have large nuts and high yields. Seedlings should be planted with the seeds of selected trees. Of course, seedlings should be planted with seeds of non-grade varieties which are nuts in large size.



Foreign Hybrid Varieties

Propagated by seeds

Cashew is produced through self-pollination and post-pollination. Therefore, the quality of the mother plant is not fully maintained in the seedlings and the seedlings have different characteristics. There is no similarity between the seedlings. However, in many places seedlings are still made from seeds. Because of the demand for seedlings, grafting seedlings are not readily available here. If you want to transplant from seed, you need to collect mature, weather-friendly, fast-growing, high-yielding and good quality seeds from the selected mother plant.

Nutritious, disease and insect free seeds of the same size should be taken to make seedlings (stock) as the original pair for seedling or grafting from seed. After soaking the seeds in water, the seeds will float in the water and they should be removed. To get better seeds, after mixing 150 grams of sugar per liter of water, the seeds have to be dipped in that water. Exclude those that will float in the water and plant only the sinking seeds. Mature seeds collected from the tree should be sown as soon as possible.\

Seed germination capacity decreases with time. The higher the relative density of seeds, the more seeds will germinate. For direct sowing of seeds in the field or land, 2 selected seeds in each hole 2.5 cm. must be sown deep. Then it is best to give straw mulch. If 2 seedlings have germinated, the remaining seedlings should be removed leaving the good seedlings. If you want to plant seedlings in poly bags in the nursery, you have to plant seedlings in deep poly bags. This is because the Cashew seedlings form roots very quickly and go deep into the soil. 1 seed in each bag 2.5 cm sow deep in the soil. Seeds will germinate in 1 to 3 weeks. All seedlings should be planted in the field within 4-5 months.

Seedlings made by asexual method

Grafting / budding seedlings must be planted to get good quality yield from cashew nuts. If the seedlings are germinated by asexual method, all the plants will have the same characteristics and the yield will be higher and the size of the nut will be of desired quality. There are several methods for asexual reproduction from this mother plant. One of these methods is cutting. In this case 20-30cm. Take long pulses. Its leaves should be discarded and only one leaf should be placed on the front. At the beginning of the cutting, the rooting hormone should be immersed in water. Then about one third of the

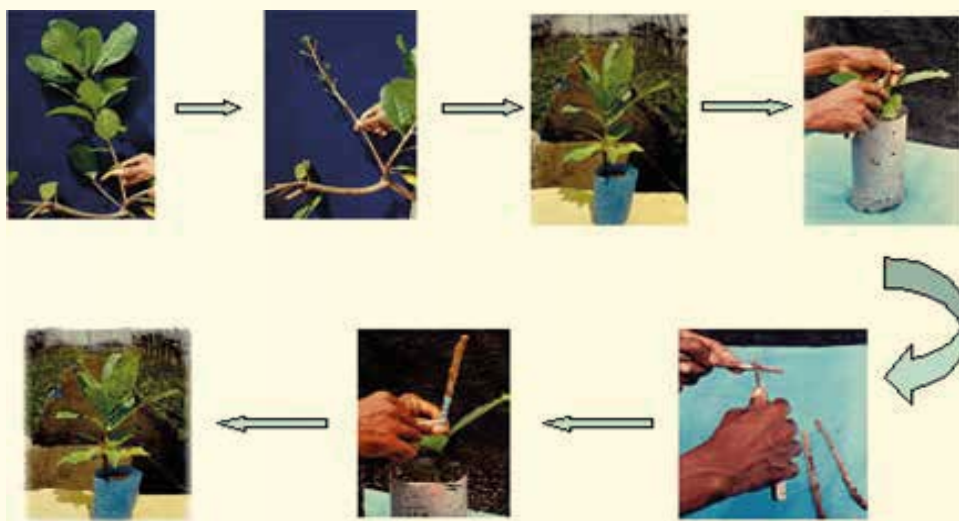
corner should be planted in the routing media. There will be light shade on top and water spray should be arranged to keep the humidity high. It is difficult to get more than 10-15% seedlings in this method.

Budding

Although research has been done on several types of budding, eye budding or clapping is better. 1 cm square skin should be taken from the current season's stalks and the same amount of skin should be taken from the stalks of the original seedlings and the skin of sion should be tied 20-40 cm from the base of stock seedlings. Must do budding on top. 20 cm from the place of budding the top of the tree should be cut off. When the bud bursts, the top residue should be cut off near the budding. It is better to do budding on 6-12 month old seedlings and this method is most suitable at the end of monsoon.

Grafting

The cleft graft method is the simplest and best result among asexual methods for grafting. This method gives the best results if grafting is done on 3/4 month old seedlings and in autumn/fall season. Cleft graft method first 15 cm of the original plant. The head must be cut off. Then cut the stem in half with a knife. Sion stalks with equal fence should be cut in both sides about 4 cm. The prepared sion should be inserted in the middle of the cut part of the original tree and tied well with polythene ribbon. Now the sion should be covered with polythene packet. Later, when new buds come out of the sion, the polythene packet has to be opened.



Clefting Method

It should be noted here that it is very difficult to find suitable sion for budding or grafting from old trees. Because the branches of the old tree are thin and crooked. The mother plants from which sion should be collected should be well pruned and irrigated as required by providing a balanced amount of fertilizer. This method gives a lot of suitable grafting / budding sion from the same tree.

Top working

Trees that are not of good quality or do not give the desired quality of fruit and are old or old have to do top working. All these trees can be transformed into improved varieties through top working like mango trees. In this case, at the end of the monsoon, between November and March, the main stem of the tree should be cut at a height of 1-1.5 m from the ground. After several days a lot of new branches will grow around the cut part. The remaining branches should be dismantled leaving the desired quality and suitable branches of grafting around. These branches should be used as original joints for grafting with sion from selected mother plants of desired quality. It is better to complete the work of grafting before the monsoon. In our country, the success rate is higher if you do it from March to June.



New buds on the top working tree



Grafting on new branches



Top working tree



2 year old top working tree

Planting method

Cashew trees can be planted at a distance of 7 to 8 meters and 170 and 156 trees per hectare respectively. However, up to 625 trees can be planted per hectare by planting 4 meters in a row. It gives the highest yield from the same land. However, if such a tree is planted, the tree should be pruned every year in such a way that the stalks of the side trees do not fall on other trees. It is better to use contour method or triangle shape method for planting trees in hilly areas.

Grafting seedlings of improved hybrid varieties are not yet available in our country. So many people plant seedlings. Again in hilly areas where zoom is cultivated it sows seeds directly at certain distances. Each hole for planting seedlings is 1 meter in diameter and 50 cm. deeper is better. In each hole, 2 kg of organic manure, 200 gm of DAP, 150 gm of MOP, 100 gm of Gypsum, 25 gm of Boron fertilizer should be mixed in the soil and seedlings should be planted after 10-12 days. After four plantings, the tree should be tied with a stick so that the root cannot move. Seedlings can be planted throughout the year if irrigation facilities are available. However, it is better to plant in the soil moisture in the first half of the monsoon.

Intercropping

Cashew garden is quite vacant up to 2/3 years after planting. Different types of crops can be cultivated in the open space. However, regardless of the crop, care should be taken not to provide shade to the cashew tree. In the open space of the garden short term coffee, papaya, pineapple, vegetables, spice crops like ginger, turmeric etc. can be produced. In addition, planting other legumes, including legumes, Chinese nuts and phelan, increases soil fertility and reduces weed infestation. However, if the infestation of stem and root piercing insects is high, it is better not to intercrop cotton, tea, sweet potato, guava etc.

Fertilizer management

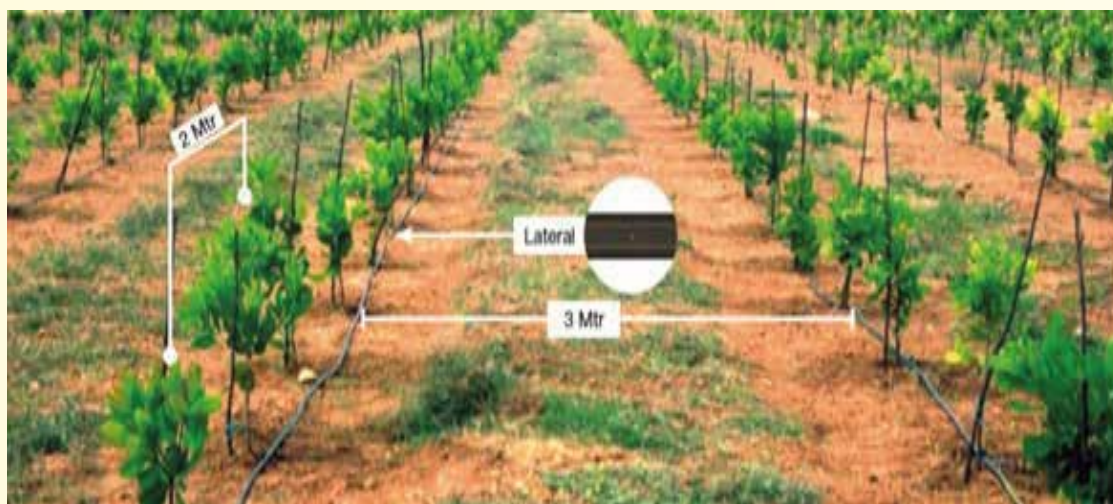
The amount of fertilizer depends on the soil texture, soil fertility, weather and age of the plant. Although the exact amount of fertilizer in the Cashew tree is not known, the Cashew tree has a lot in common with the mango tree. So the amount and schedule of mango tree fertilizer can be used. Fertilizer should be applied during the rainy season or before irrigation. However, it must be remembered that the soil must be moist when applying fertilizer. If the tree is small, the shade of the tree should be as close as possible and if the tree is big, fertilizer should be applied between 2 rows of trees. It should be noted here that the Cashew tree prefers N,P Zn. In order to get good yield of Cashew, fertilizer should be applied as per the following table:

Sl.	Name of Fertilizer	1st Year	2nd Year	3rd Years	4th Years	5th Years and Above
01.	Organic Fertilizer (KG)	10	20	20	30	40
02.	Urea (gm)	250	500	750	1000	1200
03.	DAP (gm)	200	400	600	800	1000
04.	MOP (gm)	150	300	450	600	750
05.	Zink (gm)	30	50	50	60	60

The fertilizer mentioned in the table should be applied in 2 equal installments on the 1st day of monsoon and towards the end of monsoon. Fertilizer should be applied to the seedlings outside the shade of the tree at noon. If the ground is flat, 25 cm around the tree wide and 15 cm. deep the soil should be covered by applying fertilizer in the drain in ring method. The diameter of the ring should increase as the tree grows. In case of hilly up and down lands, fertilizer should be applied by making small holes around the tree. In order to cultivate organic cashew, only organic fertilizers should be used instead of chemical fertilizers. No chemical fertilizers or pesticides can be used on the land for the last four years even before the announcement of organic cashew. This means that, cashew produced from land that has not used any chemical fertilizers and artificial pesticides in the last four years can be called organic cashew.

Irrigation

Studies have shown that the growth of small seedlings can be doubled if irrigation is given during drought. Drip or sprinkler irrigation is a good way to irrigate the seedlings. Thus irrigation has to be given for up to 4 years. Since the roots of the Cashew tree penetrate deep into the soil, it has the ability to withstand drought. But if there is excessive drought while picking flowers and fruits, there is a problem of falling young fruits. Therefore, if irrigation can be given in the dry season, it increases the yield by preventing fruit drop. Depending on the situation, each adult tree needs up to 1800 liters of water irrigation every 15 days.



High density Cashew garden with ideal irrigation

Pruning the stalks

In case of pruning, grafting or grafting of seedlings, if any type of stalk emerges from the root stock or rootstock, it should be cut as soon as possible. Pruning should be started about 2 years after planting the seedlings and pruning should be completed within 3rd year. The stalks need to be pruned at the bottom and on the sides to make the tree stand up and form a strong structure. To keep the tree at a certain height, the head of the main stem should be cut at a height of about 1-1.5 m. Later, if it is 2-2.5 m from the ground, the heads of the main stems should be cut off again. In this way the tree has to form shrubs in small condition. Subsequent stalks, stalks infected with various diseases and insects and extra dense stalks should be cut off. pruning paint should be applied on the cut part of large stalks to prevent disease attack. It is better to do the pruning work before or after the monsoon after collecting the fruits. High density Cashew garden need to be pruned every year in July-August as well as overlapping stalks in the trees.



Limb pruning tree



Limb pruning tree after 3 months



Flowers on limb pruning trees



Fruit tree with limb pruning in 2nd year



Pruning trees



Fruit trees



Cashew fruit with nut

Pest management

Insects

In the various cashew nut producing countries of the world, many types of insect infestations are observed. Compared to that, there is no such deadly attack in our country. But the rate at which Cashew seedlings/cuttings are being imported from abroad cannot prevent the spread of insects through proper quarantine and it is not impossible to get rid of deadly insects in the near future.

The following is a description of some of the cashew insects, symptoms of damage and control measures:



Stem and root piercing insects

The larvae of this insect penetrate the stems and roots and eat the bark cells. In severe attacks, the affected part dries out and dies. Symptoms of this insect attack include small holes at the site of attack and gummis. The leaves of the affected stems turn yellow and eventually die and the leaves fall off and the stems dry out. It is very difficult to control these insects but it is necessary to control these insects through a combination of different methods. Infected stalks should be collected, burned or destroyed to control these insects. As in Bangladesh, pesticides should be sprayed once in April/May and once more in November. Among the pesticides, a cloth should be dipped in the solution prepared by mixing Carbaryl 150 mg pesticide in 2 gm per liter of water and wrapping it at the base of the tree. A mixture of 1 part tar and 2 parts kerosene is applied on the trunk of the tree but good results are obtained. This insect can be easily controlled by applying kerosene on the cotton and inserting it in the affected pores.

Tea mosquito bug

The nymph and adult insects feed on young leaves, young stems, flower buds and young nuts and fruit juices. The saliva of this insect is very poisonous. The affected part burns and later dies. In severe attacks, the young stems dry out and die. Their number is much higher when new leaves emerge before the monsoon. Then the intensity of the attack can be seen more.



In order to control this pest, Carbaryl 0.1% or Dimethoate 0.05% or Chlorpyrifos 0.05% during emergence of new leaves before monsoon and once more at the time of leaf emergence and once more at the beginning of flowering and immediately after fruit set. Good results are obtained by spraying once more in the condition.

Thrips

The nymph and the adult insect suck the sap from the underside of the Cashew leaves and attack parallel to the leaf veins. At first the yellow spots on the leaves begin. Later yellow spots turn gray and finally silver. Insect infestation is more prevalent in the dry season. This insect can be easily controlled by spraying Carbaryl 0.1% or Monocrotophos 0.05%.

Fruit and nut borers

Caterpillars damage apples and seed nuts by eating the inside. Their infestation can be reduced by spraying once in the early stages of flowering and once more in the young stage after picking the fruit.

Disease management

Cashew tree is not affected by serious disease. But some disease can cause damages. Some diseases and preventions are mentioned below:

Powdery mildew disease

It is a fungal disease. The fungus attacks the young tips and inflorescences of cashew tree, causing the affected part to dry out and die. Outbreaks appear to be exacerbated during cloudy weather. Sulfur fungicides such as Cumulus DF can be sprayed by mixing 2 gm per liter of water.



Leaves infected with powdery mildew disease

Dieback or pink disease

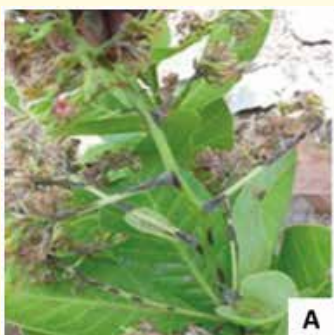
In this disease, starting from the upper side of the branches of the tree, it dries out and dies. In order to cure this disease, the affected dagger should be cut and filled with some fresh parts. Pruning paint should be applied on the cut part. The benefits are obtained by spraying 1% pruning mixer or copper fungicide once in May-June and once more in October.

Anthracnose

In this disease brown spots appear on the leaves. Later slowly he dies. Invasion of this fungus in inflorescence causes considerable damage to the crop. In order to cure this disease, the affected leaves should be cut and buried. When new leaves and inflorescences emerge and can be controlled by spraying 1% pruning mixer or approved fungicide.



Symptoms of various types of spots on the leaves due to anthracnose



Spots on inflorescence due to anthracnose



Dry inflorescence



Stains in the fruit



Spots on leaf



Rusty disease

Fruit collection

For the first two years, it is necessary to break the flowers and prevent the fruit from growing and create a beautiful structure. In the third year the fruit must be collected from the tree. The timing of fruit collection depends a lot on the variety. Fruit picking time from most varieties in India is from February to May. The harvest season of Cashew nuts produced in this country is May to June. However, if the fruit collection is completed before the onset of monsoon, the quality of the fruit remains the same and the yield is higher.



Cashew fruits with Nut



Cashew fruits without Nut

Up to 8-10 kg of cashew nuts are available in every tree of our country under good management. After collecting cashew nuts, they should be dried in the sun for 3-4 days at a time and packed in sacks to prepare for the next process.

Cashew nut grading

Cashew nuts are graded in various ways in different conditions. The grading of whole cashew nuts as follows:

Grade A: Grade 1 contains less than 160 nuts per kg. Large nuts are included in this grade A.

Grade B: 1 kg contains 181 to 210 nuts. This is the grading of medium sized nuts.

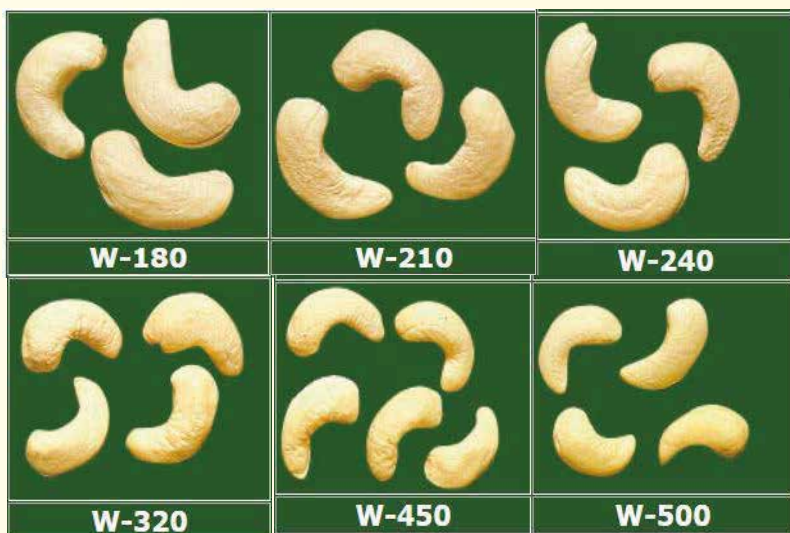
Grade C: The number of nuts in 1 kg is more than 211. The smallest nuts, the demand for export is low and the price is low.



Different Grades of Cashew Nut

Grading of cashew kernel

Grading of cashew kernel are graded on the basis different size, weight, quality, color etc. as shown below:



Different Grades of Cashew Kernel

Description of cashew nuts according to grading

Grade	Quantity (Per pound)	Quantity (Per K.G)
W-180	180	395
W-210	210	465
W-240	240	530
W-320	320	706
W-450	450	990
W-500	500	1100

Properly Dry and Store Cashew Nuts

Cashew nuts are usually collected during May to July. At this time there is a lot of rain in our country. There is a lot of moisture in the air. Cashew nuts are an oily national crop. When stored with moisture, the nuts inside are spoiled very quickly and the top color of the nuts is also spoiled. As a result, its value in the international market decreases a lot and it becomes unfit for export. So nuts need to be dried well after harvest. In order to preserve the quality and preserve it for a long time, the moisture rate of cashew nuts should be kept between 9 to 10 percent.



Cashew nuts are properly dried and stored

Care should be taken to store quality and well dried nuts. Prior to storage, nuts of cheetah, stained and deformed shape should be selected and discarded. Only dried nuts should be stored in airtight bags. In our country, it rains from May / June to September / October and the air is very humid. If well-dried nuts are not stored in airtight bags, they will retain moisture and spoil. Moreover, sacks of Cashew nuts should not be placed directly on the floor but on the deck. Properly stored, cashew nuts are good for 6 months to 1 year.

Cashew nut processing

Cashew nut is a two-layered kidney-shaped nut. Between these two layers lies a kind of oily alkaloid chemical which, when mixed with edible nuts, cannot be removed. Again, due to the presence of these chemicals, the taste of the cashew kernel is lost and it gets stuck in the throat while eating. The quality, price and demand of nuts are all reduced and such nuts are not exportable. There are several ways to extract alkaloid-free eating kernel from nuts. Among them, the local method in this country and the method of extracting nuts with the help of machine are discussed below:



Cashew nut processing method

Local method

In this method, whole cashew nuts are cut into two pieces with betel nut cutter/ dhama/ mata and edible kernels are taken out from the inside of the piece by piercing it with a sharp object. After these pieces of kernels are well dried in the sun, the thin brown skin on top of the Cashew kernels is removed. Good quality Cashew Kernels are marketed by frying them in oil and adding salt. During processing in this way, the oil of Cashew nut shell is mixed with the kernels which are no longer free. Due to the presence of these chemicals, the taste and quality of Cashew kernels are lost and the demand for it decreases, making it impossible to export abroad.

Processing by machine

This method is the modern method. It maintains the taste and quality of Cashew. Thus processed cashew is in demand for export and can be sold at good prices. In this method, during processing, the nuts are first separated by small and large grading. The two-layered thick shell of cashew kernel is elastic. When hit, the skin of the seed becomes brittle and the inner nut is far from being separated, the Cashew kernel is broken into pieces. To remove this type of elastic shell, the upper shell has to be crunchy and brittle. The following methods are used to make it crisp and brittle:

Method of frying in drums

In this method the nuts are taken in a drum and fried for a certain period of time. The alkaloids in the skin of the husk come out and crush the nuts. This method emits a lot of toxic gases which are harmful to the environment.

Oil frying method

In this method, a pot is fried in 210 degree centigrade hot oil for 2 minutes or 200 to 203 degree centigrade hot oil for 3 minutes. Immediately after removing from the hot oil, water is sprinkled and cooled so as not to over-fry. During frying in hot oil, Cashew nut shell oil comes out and mixes with the pot oil. This way you don't have to put oil in the pot while frying. Cashew nuts are fried with shell oil. If the Cashew nuts are fried properly, the shell becomes crispy and brittle. Later, the shell is hit and the nut inside is taken out. In this method, oil may suddenly fall on the eyes, face or body. This method is not a modern method.

Steam frying method

The above methods have some problems and are not environmentally friendly. Processing in this way does not result in a large quantity of good quality edible kernel. Steam and pressure methods are used to make cashew nut shells brittle and crunchy. In this method, cashew nuts are filled in a container and the vapor of specific heat is 100-110 kg / cubic cm. heat under pressure for 15 minutes. When heated in this way, the cashew nut shell becomes brittle and crunchy when cooled. Then he hit the cold nuts with something with the help of the machine and the nuts came out in 2 pieces and the edible Cashew kernel came out. It does not allow the oily substance of the shell to mix with the Cashew kernel and the edible kernels also remain whole. With the help of machine, Cashew nut shells are separated on one side and edible kernels on the other side.

Whatever method is used, the thin brown membrane on the top of the kernel is removed by heating in the oven for 4 hours at a temperature of 70 degree C. Then the nut is seen in white color. The oil is then collected by pressing the shells to extract the Cashew nut shell oil from the shell. After extracting the oil from the shell, the shells are used as organic fertilizer.

By-products

Several important by-products are available during Cashew fruits processing. Some of the by-products are discussed below:

Cashew juice

Cashew apple remains at top of the Cashew nut. This apple contains about 80% juice which is very nutritious and medicinal. It is 6 times richer in vitamin C than orange. It is easy to produce Cashew juice from Cashew apples with which we can eliminate the malnutrition of vitamin C in the people of the country.



Cashew nut shell liquid-CNSL

The oil produced from the shell of the Cashew nut can be used to produce high quality pesticides which are essential for safe crops and food production. On the other hand, it will save hundreds of crores foreign exchange by preventing the import of chemical pesticides that are harmful to the human body and the environment.



Organic fertilizer

After extracting the juice from the cashew apple and taking the oil from the shell, it is possible to produce thousands of tons of good organic fertilizer with the help of husk which is very important for the production of safe crops. It should be noted that the soil of our country does not have humus or organic matter. Because of this our soil is almost dead. Soil scientists have reported many years ago that about 6 crore tons of organic fertilizer is needed to restore the soil to its normal state. The solution of which we can solve very easily through cashew production.



CDM fund

There will be about 140 million Cashew trees in about 2 lac hectares of land in the mentioned districts. If each tree absorbs 10 kg of greenhouse gas or carbon dioxide, the total amount will be 1.4 million tons. The UNFCCC will pay about 20 US dollars per ton for absorbing greenhouse gases. According to that calculation amount of the CDM fund will be about 28 million US dollars or 238 crore taka, which is a great honor and pride for us.

Cashew packing and marketing

After processing of cashew, the kernels are quite dry (3% moisture) and brittle. It is kept at 80% humidity for 5/6 hours. More dried cashew absorbs some moisture and reduces brittleness. The quality of grading has to be specified while exporting or packing

cashew kernel. First it is divided into whole kernel and broken kernel. Again the broken kernels are divided into 2 parts. White pieces of kernel and stained pieces of kernel. Care should be taken to ensure that there are no insect infested cashew or black / brown kernel during packing. Before packing the kernel in different ways, different spices like salt, sugar, ginger etc. are mixed to make different flavored cashew. Kernels are marketed in different packets or tin cans so that the inside cashew kernels are fresh and crispy.



Employment

The cashew sector requires a lot of manpower. Many people are needed in various fields including planting, nursing, production, fruit collection, processing, preservation, production and marketing etc. The cashew industry needs a lot of women workers like garments. There are many employment opportunities for women.



Cashew Processing Factory

Use of cashew

Cashew can be used in a variety of ways. Used in the ice cream industry and in the bakery industry as a variety of expensive and delicious food making ingredients. Cashew salad is one of the most popular and widely used Chinese / Thai dishes. Fried Cashews are sold in different types of packets. Cashew chocolate, Cashew ginger, Cashew salted, Cashew sweet etc. are marketed differently in different countries. Broken kernels are used to make many more expensive foods, including cashew butter.



Biscuit



Cake



Cashew Apple Juice



Cashew Pilaff



Ice-cream



Cashew Candy/Chocolates



Cashew Curry



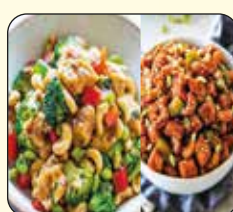
Cashew Salad



Cashew Milk



Roasted Cashew



Cashew Chicken



Cashew Butter

Different types of problems regarding cashew in Bangladesh

Local and low yield varieties of cashew

The variety of cashew being cultivated in the country at present is a local variety. The yield and weight of cashew of this variety are low and also small in size. All these trees bear 1/2 fruit in bunches. Due to this the yield of this variety is not as expected. But improved varieties bear much more fruit in the same bunch.



Improved Varieties of Cashew

Comparison between high yield variety and local variety

Sl.	Name of Varieties	Weight of Per Cashew (gm)	Grade of Nut	Production on (kg) tree/year	Grade of Kernel	Comment
01	Priyanka	10.8	Grade- A	17.03	W-180	Yield is high, exportable & market price is very high
02	Vengurala-1	6.2	Grade- B	19	W-240	Yield is high, exportable & market price is very high
03	Vengurala-4	7.7	Grade- A	7.2	W-220	Yield is high, exportable & market price is very high
04	Local Variety	4/5	Grade- C	4/5	W-440	Yield is low, not exportable & market value is very low

Looking at the table above, we can see that the yield of improved varieties of cashew is several times higher than the local varieties in our country. Again both the size of the nuts and the portion of the kernel inside are much larger. The demand for such large size cashew in the international market is high and the price is very high which can earn a lot of foreign currency through export. Due to the small size of the local varieties of cashew in our country, the processing cost is high and it is difficult to capture the export market.

Farmers have less knowledge about modern technology in cashew production

Outbreaks of various deadly diseases have been reported in Cashew cultivation. Different types of harmful insects cause a lot of damage to cashew. It is necessary to have sufficient knowledge to learn all the methods of controlling these deadly diseases and harmful insects and to take remedial measures. Cashew requires different types of care. Good yields can be expected if care is taken on time. Cashew is an oily crop. Therefore, if not collected in time, the color and quality of cashew nuts are lost. Cashew nuts become spoiled and inedible in a very short time if the management of storage is not done properly after collection. Farmers in our country do not have much knowledge about cashew production, pest control, collection and storage. To solve these problems, farmers need to be trained up through modern technology and training on farming.

Communication is inaccessible and transportation costs are high

At present most of the production of cashew is in remote hilly areas and the communication system there is not convenient. Again, it is very difficult to transport cashew from there as many places are inaccessible. Due to all these reasons, the transportation cost of cashew increases and hence the production cost also increases. On the other hand, traders who buy cashew do not go there much. Even if they do, they buy Cashew at a very low price. For these reasons, real farmers cannot sell cashew at attractive prices. Farmers will not be able to sell cashew at the actual price unless communication system is available. Farmers are facing losses due to rising transport costs due to difficult communication in hilly areas.

Farmers do not get the real fair price of cashew produced

The marginal farmers do not get a fair price for their cashew for various reasons. In particular, many types of brokers take advantage of the weakness of farmers in hilly areas. Many traders buy nuts at a very low price with advance money. Again, due to various syndicates, farmers cannot sell to others at a fair price. As a result, the farmers lost interest in producing cashew.

Lack of cashew processing industry

As you already know, our country produces a lot of cashew. At present, due to lack of processing, whole cashew nuts go abroad. These nuts are packaged after processing and imported back to our country. On an average, about 4/5 kg of whole Cashew nuts yields 1 kg of processed Cashew Kernel. According to the current price, 4-5 kg whole Cashew nuts cost around 300-400 tk. But the price of one kg of processed or packaged Cashew is around 800-2000 tk or more. If any factory is set up in the country, there will be a demand for locally produced Cashew and farmers will be able to sell Cashew at a fair price.

There is no research activity on cashew development, disease and insect control

Cashew is an agricultural product. There are various problems in its production. Many nuts are wasted due to various diseases in the climate of our country. Again, it is necessary to find out which of the developed varieties of many countries is suitable here. That is why there is a need for constant research. Many countries in Africa, especially Thailand, Vietnam and Cambodia, have attractive quality improved varieties. But some varieties of those countries have good yields but may not be good again in the climate and environment of this country. The only solution is to invent and determine the right variety through research. Again, research is needed to find the right solution to control many kinds of deadly diseases or harmful insects. Therefore, development of cashew cultivation is not possible without increasing research activities. Moreover, coordination is needed with various government institutions, especially Ministry of Commerce, Ministry of Agriculture, BADC, Agricultural Research Institutes and private entrepreneurs.

Concept of international market of cashew

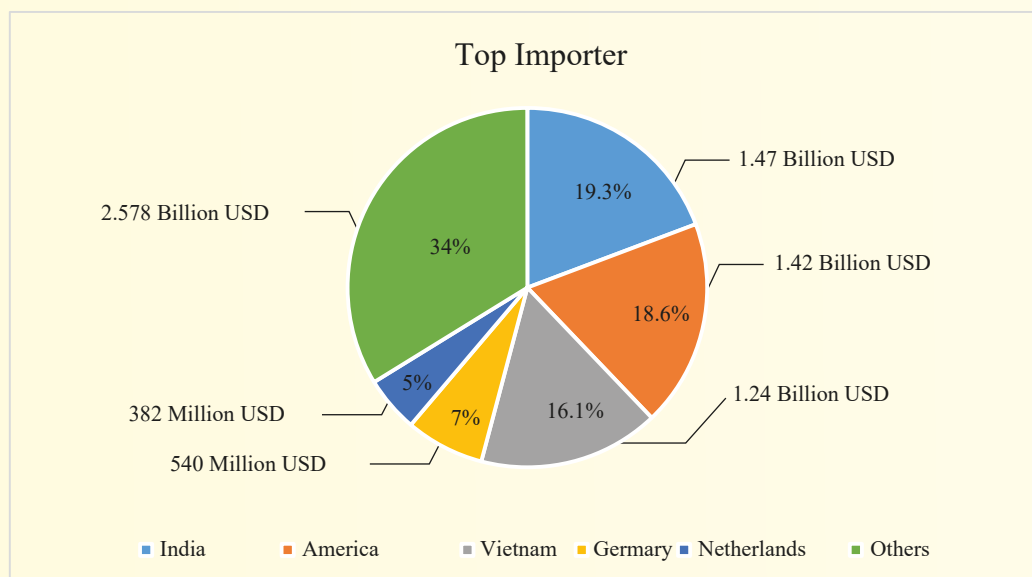
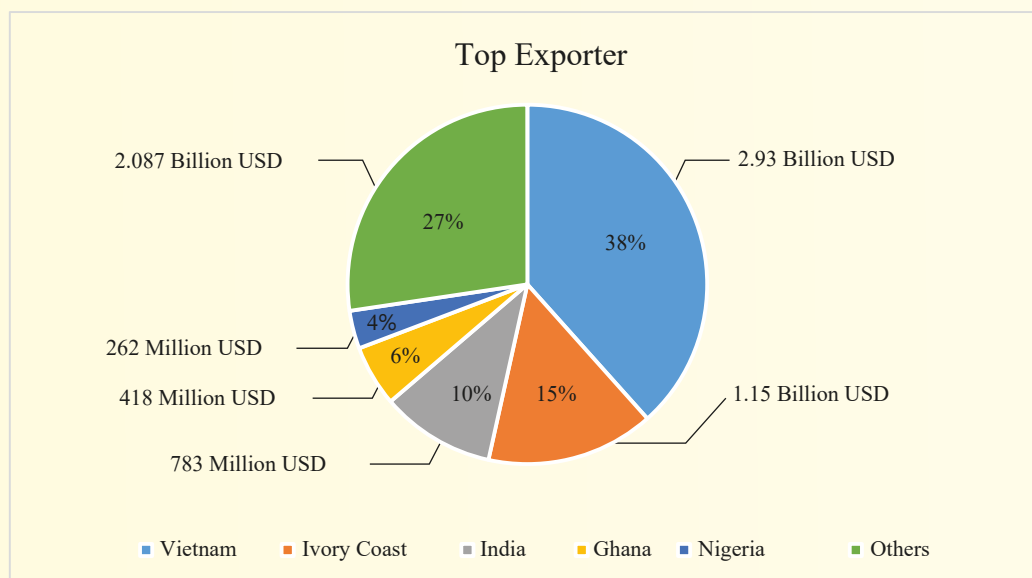
The demand for cashew in the international market is high and increasing day by day. In 2012, Vietnam ranked first by producing 11,90,900 tons of cashew. The cashew export market in the world last year was about six billion dollars. Vietnam exports 60 percent or 3.6 billion dollars. The country exported 450,000 tons of cashews worth 3,258 million tons to the United States in 2019 alone. They are dreaming of exporting 10 billion dollars in 2030. But in 1988, the country started cultivating cashew for the first time. India is currently the world's largest consumer of cashew. More than three lac tons of cashew is used in the country every year. Besides, the country is in the top position in production and export. In the 2016-17 financial years, 67,742 tons of cashews were

the product from the country increased to 73,810 tons. In the 2018-19 financial years, Indian exporters exported a total of 60,000 tons of cashew to the international market.

Global Cashew Market-2018

7.63 Billion USD

■ Top Exporter is Vietnam 2.93 Billion USD ■ Top Importer is India 1.47 Billion USD



Source: www.oec.world [The Observatory of Economic Complexity (OEC)]

Concept of production of cashew internationally

At present, 3.5 million tons of cashews are produced worldwide. The highest production is in the West African countries of Ivory Coast, Nigeria, Ghana and Benin. These countries produce about 12 lac tons of cashews. But these countries process only 10 percent. Vietnam earns 4 billion a year by processing cashew in these countries. Although the country produces only 4 lac tons of cashew a year. On the other hand, India produces 7 lac 46 thousand tons of cashews every year. In this way Bangladesh is lagging behind. In this case, it is possible to earn huge amount of foreign currency by importing cashew nuts, adding value after processing and exporting abroad.

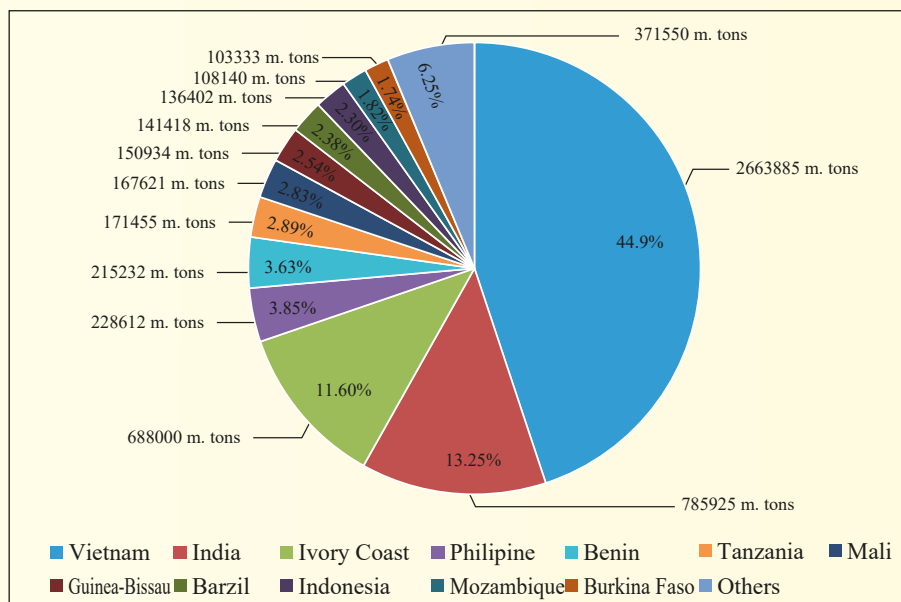
Cashew Production in Different Countries

Sl.	Name of Country	Production (M. Ton)				
		2014	2015	2016	2017	2018
01	Vietnam	980000	1408116	1221070	2157646	2663885
02	India	753000	745000	671000	745000	785925
03	Ivory Coast	550000	703000	650000	711000	688000
04	Brazil	107713	103363	74568	133608	141418
05	Philippine	170853	205531	216398	222541	228612
06	Indonesia	131200	137580	137094	131685	136402
07	Nigeria	99010	97149	98291	98150	97863
08	Malaysia	15518	15930	16185	16389	16593

Source: FAOSTAT of United Nations

Worldwide Cashew Production-2018

■ Total Production 5932507 M. tons

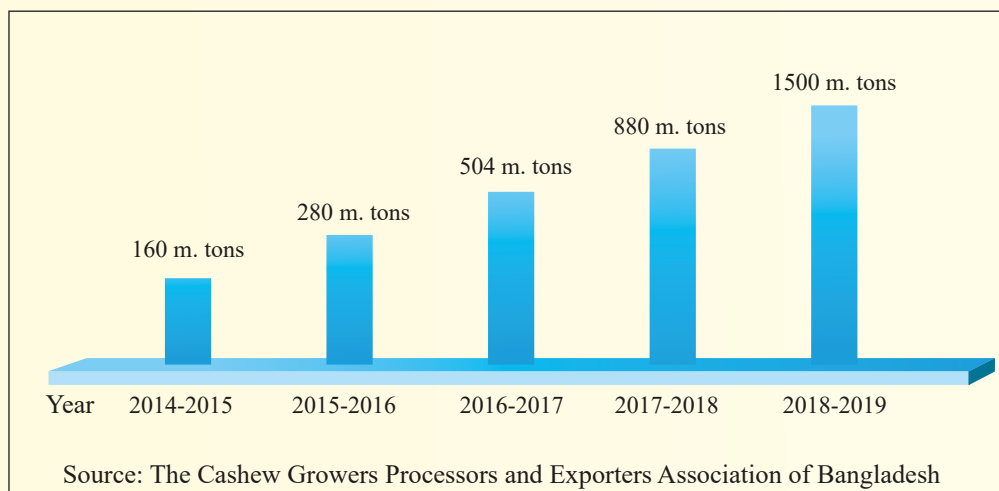


Source: FAOSTAT of United Nations

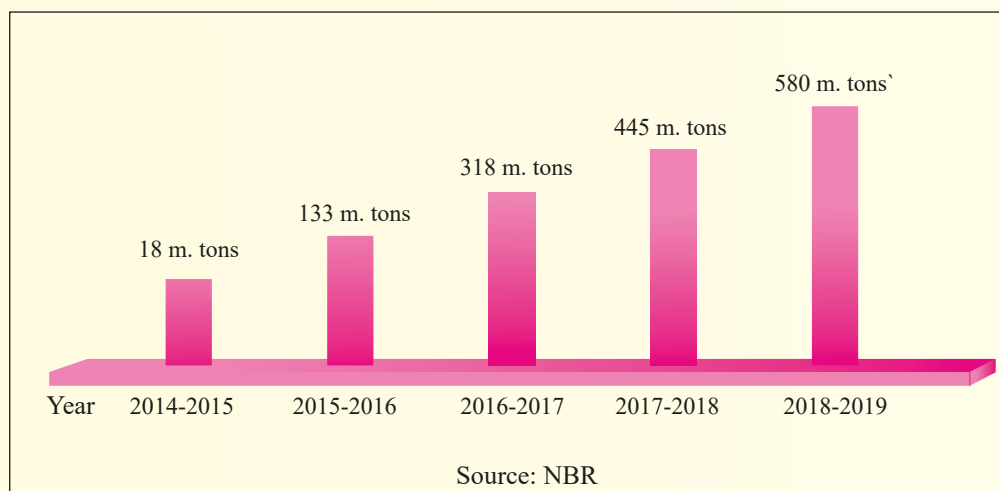
Capacity and scopes of Bangladesh in production and export of cashew

The standard temperature for Cashew cultivation is an average 25-40 C, annual rainfall is 1000-2000 mm, 500-1000 meter height from sea level and flood-free acidic sandy loam soil. Considering these factors, there is a lot of land suitable for cashew cultivation in this country. There is usually no rainfall in the hilly areas from November to April / May. That means hilly land is without rain for 5/6 months. Again, there are no facilities for irrigation. Extreme drought and hot weather prevail in March / April. Even in that condition Cashew gives quite good yield.

Cashew Production in Bangladesh



Import of Cashew in Bangladesh



In the hilly areas there is availability of cheap land and hard workers. There is very little land available at low cost to cultivate cashew in the plain areas. Buying land at a higher price requires a lot of capital. But in the hilly areas, it is still possible to buy land at low cost or easily produce cashew at low cost. It requires very little capital cashew production will be easier if the hardworking manpower can be utilized here. Moreover, the people here already have experience in cashew production.

Cashew grows well in hilly fallow lands. With a little care, it is possible to get 1.5 to 1.8 tons of cashews from one hectare of land. Its market value is around 1,00,000 - 1,50,000 tk. No other crop seems to be available so easily in the hilly region with so little capital. The cashew tree keeps the environment cool and helps to create a comfortable environment and also plays a role in preventing soil erosion.

In order to develop cashew production, farmers need to be equipped with more modern knowledge through training. Cashew has great potential in Sylhet, Panchagarh and Nilphamari districts including hills and Barind region. In the three hill districts of Rangamati, Khagrachhari and Bandarban, about five lac hectares of land is lying fallow or fallow. Of this, if cashew is produced in about two lac hectares of land, it is possible to earn more than 1 billion dollars a year, which is about 9 thousand crore tk in Bangladeshi currency.

Bangladesh has to do for producing and exporting of cashew

In total, only one / one and a half thousand tons of cashews are produced in this country every year. However, there are five lac hectares of land suitable for cashew production in Bangladesh. With the target level of production in two lac hectares of land, production of cashew can be started now. If this can be done, the production of cashew in Bangladesh will stand at around three lac tons. With these nuts, it is possible to earn about one billion US dollars a year by meeting the demand of the country and exporting it abroad. To this end, the following tasks must be done:

Distribution of high yield and developed varieties of cashew

At present, the production of cashew in our country is not of such an improved variety. India and Vietnam have already researched and developed high quality cashew varieties. The small trees of those improved varieties yield quickly and the size of the nuts is also large. Cashew nuts collected from high quality varieties have a much higher price in the international market. The climate in India, Cambodia and Vietnam where cashew produced is similar to that in Bangladesh and the quality and yield of these varieties are very high. Producers will benefit if they can arrange for planting of seedlings by collecting those improved varieties / seedlings. Therefore, if we want to revolutionize the development of cashew in this country, we must take steps to distribute grafted seedlings of improved varieties (hybrid / inbrit) cashew among the farmers at subsidized prices and if possible at an early stage.



Yield of Improved Varieties of Cashew

Development of communication system

At present most of the cashew is produced in remote hilly areas. Many places in the hills are inaccessible and it is very difficult to transport cashew from there. Due to all these reasons, the transportation cost of cashew increases and hence the production cost also increases. On the other hand, traders who buy cashew do not go there much and even if they do, they buy cashew at a very low price. For all these reasons, real farmers cannot sell cashew at attractive prices. Unless communication is easy and cheap, farmers will not be able to sell cashew at real prices. Therefore, it is necessary to take measures to develop communication system in remote hilly areas.

Arrange the fair price of cashew produced by farmers

Actual farmers do not get a fair price for their cashew for various reasons. Arrangements have to be made so that the farmers get a fair price. Many types of brokers, especially in hilly areas, exploit the vulnerabilities of farmers. Many traders buy nuts at low prices with advance money. Again, due to various syndicates, farmers cannot sell nature to others at a fair price. For this, government institutions have to open procurement centers to purchase cashew from farmers at fair prices. Later, it would be better if the government could supply cashew purchased at subsidized or lower prices to the processors / factory owners.

Arranging training and motivation trips

New technologies for cashew production are being discovered day by day. Through these, farmers can learn a lot about cashew production. Various workshops and trainings need to be arranged to impart modern technology and knowledge to the farmers. Production of cashew requires different types of care. Good yields can be expected if timely intercropping is done. Farmers are the mainstay of cashew cultivation, on which the production and quality of cashew depend. If there is knowledge about cashew cultivation especially improved varieties and diseases and pest control and collection and storage of cashew, various problems will be solved in time and good quality high yield opportunities will be created. Therefore, farmers need to be trained from time to time to impart knowledge about newly invented technologies. This will increase the confidence of the farmers and encourage them to work.

Providing agriculture equipments and subsidies to the farmers

Different materials are required when producing cashew. These materials include fertilizers, high quality grafting seedlings and various pesticides. Subsidies / subsidies like fertilizers, seedlings / pens, pesticides, irrigation systems etc. can be provided to encourage the actual growers and reduce the cost of cultivation. Although cashew growers are willing to plant foreign hybrid varieties of cashew, high yielding cashew is not readily available here. If you can irrigate during extra drought, the yield of cashew is quite good. Therefore, the government should take steps to procure quality seedlings / cuttings from abroad and distribute them to the actual producing farmers at low prices or at subsidized prices or free of cost.

Take initiatives to development varieties and make them disease free including research activities

As cashew is an agricultural product, there are various problems in its production. Regular research is needed to find a solution to those issues. Many countries in Africa, especially Thailand, Vietnam, Cambodia, have attractive quality varieties of improved varieties. But some of these countries may have good yields, but they may or may not have a good climate. The only solution is to invent or determine the right variety through research. Again, research is needed to find the right solution to control many kinds of deadly diseases or harmful insects. Therefore, development of cashew is not possible without research activities.

Establishment of modern processing factory

The demand for Cashew in the international market is increasing day by day. Although our country produces about 3000 tons of cashews, due to lack of processing, we have to export cashew with shell which is much cheaper. One kg of processed cashew kernels cost around 1000-3000 tk. To get one kg of processed cashew, you need about 4/5 kg of cashew nuts which cost about 300-400 tk or less. If processed with the help of modern machines, the commercial price of cashew will increase a lot and the demand for cashew will increase in our country. With the setting up of a cashew nut processing factory, there will be a few more important by-products besides cashew that price is also good. Above all, there will be a demand for cashew in this country and farmers will get a fair price for their produce.

Arrange for the cultivation of organic cashew

At present, more serious diseases such as cancer, diabetes, heart disease, blood pressure, kidney, liver and other physical problems are seen more than before. According to experts, there are many reasons for this, but the main reason is the misuse of pesticides, including various chemicals. The more we can reduce the use of synthetic chemicals to produce agricultural products, the better it will be in protecting human health. We, like other crops, will have the opportunity to sell cashew at good prices in the country and in the international market by following organic farming policy and the demand for organic crops in the international market is increasing day by day.

Cultivation of cashew in fallow lands including hilly areas

In hilly areas, eco-friendly cashew gives good yields with little care. There is usually no rainfall in this country from November to April / May. That is 5/6 months without rain. Again, there is no opportunity to irrigate. In March / April, severe drought and hot winds prevail and in that condition many trees lose their leaves. But cashew has leaves and help to keep the environment cool and create a comfortable environment.

It does not seem that any other crop can be found so easily in the fallow lands including the hilly areas with so little capital. According to the information leaflet of the Agricultural Information Service, by exporting cashew, foreign exchange of Tk. 250 crore a year can be easily earned. Above all, cashew is a good crop for hilly, coastal, fallow, barren lands and its cultivation is economically viable.

Focusing on exports

Although cashew is produced in our country, due to lack of processing, cashew with shell are exported abroad. On the other hand, we import cashew kernel from abroad at higher prices. However, in our country, some nuts are processed in an indigenous and ancient way, but their quality is not good and there is absolutely no demand in the international market. However, the commercial value of cashew increases when processed with the help of modern machines. If we can produce organic cashew using organic technology and process them in a modern way, we will be able to export cashew abroad at attractive prices again. It will earn foreign exchange as well as create employment for thousands of people.

Undertaking various projects for the development of cashew

If a country wants to take an issue forward, it has to take the project in hand, whether it is a pilot project or a project. The project is a great way to take an urgent matter forward. Although cashew is cultivated in this country, there is ample opportunity and potential for its development. Therefore, if different projects are taken up on cashew, especially if there are measures to overcome its various problems, the farmers will benefit as well as the industrialists who set up the factory will also benefit. It will be beneficial for the country to be able to provide high quality high yielding varieties of cashew grafting seedlings to the farmers through various facilities. The varieties of cashew grown in this country are local, underdeveloped and small varieties and the yield is very low. If the factory is set up through the project, the nuts produced in this country can be used here and if in excess, it can be exported abroad. After all, if various projects can be taken up for a few years, it will be possible to develop cashew production in this country.

Health Benefits of Cashews

Prevents Cancer

Prevents heart disease

Reduces the risk of diabetes

Eliminates anemia

Boost immunity system

Prevents gallstones

Boost bone and oral health

Promotes the development of
Red Blood Cells (RBCs)

Cashew Provide Instant Energy to the Body

Seminar on Cashew Production & Export



Ruma, Bandarban



Ruma, Bandarban



A.K.M Giasuddin Milky Auditorium, Dhaka



Thanchi, Bandarban

Training Program on Cashew Production, Processing & Export



Debiganj, Panchagarh



Debiganj, Panchagarh

Training Program on Cashew Production, Processing & Export



Tetulia, Panchagarh



Tetulia, Panchagarh



Gajokathi, Debiganj, Panchagarh



Gajokathi, Debiganj, Panchagarh



Domar, Nilphamari



Ruma, Bandarban

Alternative Agriculture for CHT, Bangladesh Bandarban

Cashew Nuts Processor



Zisam Ahmed

Proprietor
Alternative Agriculture for CHT, Bangladesh
Bandarban

কাজুবাদাম নার্সারী



Md. Mostofa Kamal
Proprietor

COMPANY PROFILE IN BRIEF

Company Name	:	TISTA AGRO SERVICES
Year of Establishment	:	2020
Factory Address	:	Tistapara, Debiganj, Panchagarh, Bangladesh
Office Address	:	Plot- 6 (4 th floor), Road-13, Nikunja-2 Dhaka-1229, Bangladesh.
Phones	:	+880255098241, 01734551526
Email & URL	:	obl@organicbd.org
Factory Land Area	:	1.5 Acres
Total Manpower	:	22 (skilled/semi skilled/official/marketing)
Co. Reg Number	:	0924376
Co. ERC Number	:	R-21703
T.I.N. Number	:	142-200-7880/Co. 15, Zone-5
VAT Number	:	5101023647
Banker's Name	:	Islami Bank Bangladesh Ltd
Products	:	Cashew Nursery

Bangladesh Cashew Industries Limited

The country's First Modern Cashew Processing Factory is Going to be Set up



Mahbuba Jesmin
Managing Director

Cashew is the most delicious fruit or food in the world, which has many beneficial nutrients. We have been cultivating Cashew in Bandarban, Rangamati and Khagrachhari districts since 2015. In 2012, about 1,200 tons of Cashew nuts were produced with an export value of about 1.2 million. The number of farmers and production is increasing at a geometric rate every year.

We are going to set up the largest and most modern Cashew processing factory in the country at Debiganj in Panchagarh district. The project cost is Tk. 120000000.00 (twelve crore) and the working capital is Tk. 250000000.00 (twenty five crore). We, the entrepreneurs, are able to bear 20 percent of the project cost and hope to get a loan from Bangladesh Bank or any scheduled bank at zero percent interest rate of 80 percent. The following is a summary of the proposed project:

1.	Name of project	:	Bangladesh Cashew Industries Limited
2.	Project Type	:	Cashew Kernel processing factory
3.	The raw materials	:	Cashew Nut (Local / foreign)
4.	Processing capacity	:	10 tons daily/ 3000 tons yearly
5.	Production capacity	:	2.5 tons daily / 750 tons yearly
6.	Price of raw materials	:	80000-100000 Taka / ton
7.	Produced product price	:	700000-800000 Taka/ ton
8.	Manpower	:	160 Persons
9.	Proposed project cost	:	150000000.00 (15 Crore) Taka
10.	The amount of loan	:	120000000 (12 Crore) Taka
11.	Necessary working capital	:	250000000 (25 Core) Taka
12.	Area of Land	:	1.5 acres
13.	Grace period	:	4 years

Green Japan Limited

Konjac, Cashew & Sweetpotato Processor & Exporter

Sweetpotato



Cashew



Konjac Root & Powder



Mohammad Shamim
Chairman



Aminul Islam Bhuiyan
Managing Director

Corporate Information

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Phone: +81-3-6228-7759
Email: shamim@donnoba.com

Dhaka Office

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54, Inner Circular (VIP) Rd, Dhaka- 1000
Phone: +88 01716846164, +8801674951607
Email: daiichi.international@gmail.com

Production Unit

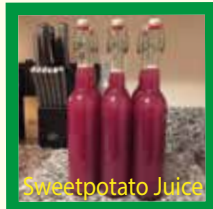
Lebutola, Jashore Sadar,
Jashore, Bangladesh.

Asia Partnership Company Ltd.

Importer

Featured Products

- * Konjac Powder
- * Cashew
- * Sweetpotato Chips, Powder & Beverage
- * Tomato Paste & Powder
- * Lemon Powder



Corporate Information

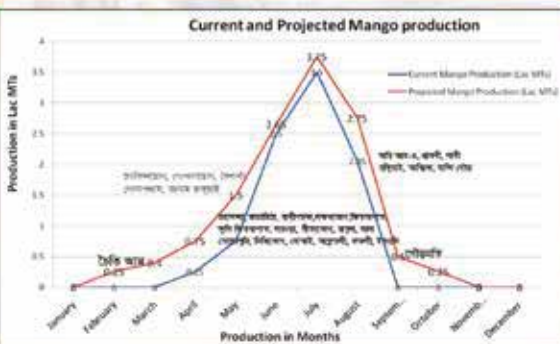
Office

Rafine- Akasaka Bld, B-1, Aksaka 2-10-7
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Phone: +8133-3505-2171, a.p.c.company12@gmail.com



Nakamura Ruyki
Director

বছরব্যাপী ফল উৎপাদনের মাধ্যমে পুষ্টি উন্নয়ন প্রকল্প



প্রকল্পের পটভূমি :

বাংলাদেশে যে ফলগুলো পাওয়া যায় তার ৬০% পাওয়া যায় ৪ মাসে (মে-অগস্ট) এবং ৪০% পাওয়া যায় বাকি ৮ মাসে। এই প্রকল্পের মাধ্যমে প্রচলিত, অপ্রচলিত এবং অন্যান্য সম্ভাব্য ফলের চাষাবাদ বাড়িয়ে সারা বছরব্যাপী সমানভাবে ফলের সরবরাহ বাড়ানো হবে। পাহাড়ি, অসমতল, অব্যবহৃত জমিতে ফলের গাছ রোপন এবং বসতিভিত্তির জমিকে উদ্যান ফল উৎপাদনের আওতায় নিয়ে এসে ফলের উৎপাদন বাড়ানো হবে। ১৯টি উপকূলীয় জেলায় প্রতি বছর প্রাকৃতিক বিপর্যয়ের কারণে ভূমি ক্ষয় হয়ে অনেক এলাকা সমুদ্র গর্ভে তলিয়ে যাচ্ছে। এর থেকে পরিচালিত পাওয়ার লক্ষ্যে এই প্রকল্পের মাধ্যমে ৫০,০০০টি খাটো জাতের নারিকেল প্রদর্শনী স্থাপন করা হবে।

প্রকল্পের মূল উদ্দেশ্য :

৩টি পার্বত্য জেলাসহ অন্যান্য জেলার অসমতল ও পাহাড়ি জমি এবং উপকূলীয় ও অন্যান্য এলাকার অব্যবহৃত জমি ও বসতিভিত্তিতে উদ্যান ফসলের উৎপাদন বৃদ্ধিসহ সমতল ভূমিতে মাঠ ফসল চাষের সুযোগ অব্যাহত রাখা; দেশীয় রপ্তানিযোগ্য ফলের উৎপাদন বৃদ্ধি এবং সংগ্রহোত্তর ব্যবস্থাপনার আধুনিকায়নের সাথে সাথে ফল প্রক্রিয়াজাতকরণ ও সংরক্ষণ সেবা বৃদ্ধি করা। প্রদর্শনী প্রদান স্থাপন, মাঠ দিবস ও অন্যান্য টেকসই পদ্ধতির মাধ্যমে উদ্যান ফসলের আধুনিক প্রযুক্তিসমূহ চাষী পর্যায়ে সম্প্রসারণ করা। বিন্যাসিত হটিকালচার সেক্টরসমূহের আধুনিকায়ন, নারীদের ক্ষমতায়ন, কাজের সুযোগ সৃষ্টির মাধ্যমে দারিদ্র্য বিমোচন করা।

প্রকল্প এলাকা :

৭টি বিভাগের ৪৫টি জেলার ৩৬২ উপজেলা প্রকল্পের আওতাভুক্ত। উদ্যান ফসল উৎপাদনের জন্য অধিক উপযোগী সমতল ও পাহাড়ি এলাকাকে প্রকল্প এলাকা হিসেবে নির্বাচন করা হয়েছে।

প্রধান কার্যক্রম :

ফল বাগান ও অন্যান্য প্রদর্শনী স্থাপন, প্রশিক্ষণ প্রদান, আরবান সেলস সেন্টার, ফল প্রক্রিয়াজাতকরণ কারখানা, অফিস বিল্ডিংসহ ট্রেনিং সেন্টার কাম ডরমেন্টার এবং অফিস বিল্ডিং কাম ট্রেনিং সেন্টার নির্মাণ। বর্তমানে দেশে ৩ লক্ষ ৪৮ হাজার হেক্টর জমিতে ফলের উৎপাদন হচ্ছে প্রায় ৪৩.৮ লক্ষ মে, টন (বিবিএস-২০১১)। প্রকল্পটি বাস্তবায়নের মাধ্যমে ফলের উৎপাদন প্রায় ১২ লক্ষ মে, টন বৃদ্ধি পাবে। এতে জাতীয় অর্থনীতিতে প্রায় ৬০০০ কোটি টাকা যোগ হবে।



বছরব্যাপী ফল উৎপাদনের মাধ্যমে পুষ্টি উন্নয়ন প্রকল্প



ক্রম নং- ৭০১, মধ্যম বিল্ডিং, ৭ম তলা
কৃষি সম্প্রসারণ অধিদপ্তর, কৃষি মন্ত্রণালয়
নামারবাড়ি, কার্মাট, ঢাকা
ফোন- ০২৯১০১১৭৩, ইমেইল- pdyrfp@gmail.com



প্রকল্পের লক্ষ্য : কন্দাল জাতীয় ফসল উৎপাদন বৃদ্ধির মাধ্যমে দেশের বর্ধিত জনগোষ্ঠির খাদ্য নিরাপত্তা, সামাজিক নিরাপত্তা নিশ্চিত করা এবং প্রকল্প এলাকার জনগোষ্ঠির আয়-বৃদ্ধি, বিশেষ করে চর অঞ্চলসহ অর্থনৈতিকভাবে অনগ্রসর এলাকার মহিলাদের আত্মকর্মসংস্থান সৃষ্টি করা এবং ফসলের টেকসই, নিরাপদ ও লাভজনক ফসল উৎপাদন বৃদ্ধি ও পুষ্টিমান উন্নয়ন করাই প্রকল্পের প্রধান উদ্দেশ্য।

বাস্তবায়নকাল : মার্চ ২০১৯ থেকে ডিসেম্বর ২০২৩

দেশের ১৩টি অঞ্চলের ৬০টি জেলার ১৫০টি উপজেলায় প্রকল্পটি বাস্তবায়িত হচ্ছে:



প্রকল্প এলাকায় কন্দাল ফসল উৎপাদন বৃদ্ধির মাধ্যমে কন্দাল ফসলের জমির পরিমাণ ২০-২৫% বৃদ্ধি করা



বিএআরআই কর্তৃক উদ্ভাবিত আলু, মিষ্টিআলু, গুলকচু, মুখিকচু, পানিকচু, লতিকচু, কাসাভা ও গাছআলুর প্রমাণিত জাতসমূহ সম্প্রসারণ করা



সুবিধাবাঞ্ছিত ও সিডর আক্রান্ত এলাকায় প্রশিক্ষণ, উদ্বুদ্ধকরণ, প্রদর্শনী কার্যক্রমের মাধ্যমে দক্ষ জনবল সৃষ্টি, কন্দাল ফসল আবাদ বৃদ্ধিকরণ ও পুষ্টিমান উন্নয়ন



উন্নত জাতের মানসম্পন্ন বীজ উৎপাদন, বীজ সংরক্ষণ ও বাজারজাতকরণ ব্যবস্থার উন্নয়ন



বিদেশে কন্দাল ফসল রপ্তানির মাধ্যমে বৈদেশিক মুদ্রা অর্জন



কন্দাল ফসল উন্নয়ন প্রকল্প
কৃষি সম্প্রসারণ অধিদপ্তর (ডিএই)
মধ্যবিভিং, ৬ষ্ঠ তলা
খামারবাড়ি, ফার্মগেট, ঢাকা-১২১৫

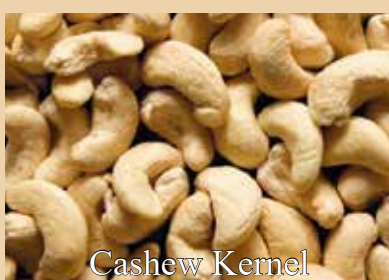


Foshol Agro Processor Ltd.

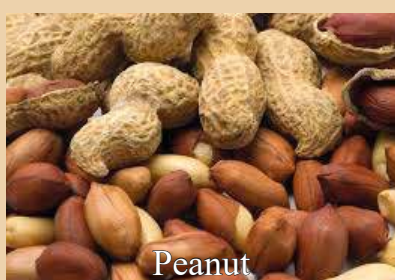
An Automatic Nut Processing Industry



A. K. Azad
Managing Director



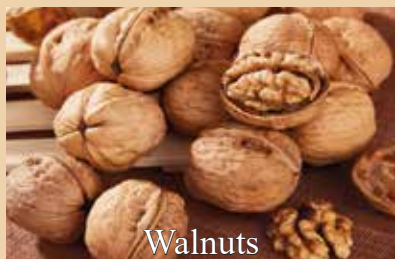
Cashew Kernel



Peanut



Almonds



Walnuts

Corporate Information

Factory Address

Juranpur, Monirampur, Jashore,
Bangladesh.

Head Office

Suit No. 12, Eastern Trade Centre (9th Floor)
56, Purana Paltan Line, VIP Road, Dhaka-1000
Phones: +88029343367, +8801716645808
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Cashew is very tasty and full of nutrients. The tree yields cashew apples and cashew nuts together. It can be used in polao, biryani, roast, sweet food, salad etc. or eaten raw kernel.



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