ACKNOWLEDGMENTS

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J. O. Adeosun
Extension Specialist (Agronomy)

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INTRODUCTION

Cashew (Anacardium occidentale L.) is a member of the family Anacardiaceae, an ever green tree with spreading large canopies which can attain the height of 9 - 13 metres. It was believed to have been introduced to Nigeria between 15th and 16th Centuries by Portuguese explorers. The tree was mainly used in afforestation schemes for the control of erosion most especially in the Eastern part of Nigeria. Large scale production of cashew however started in the early 1950's when 8,000 hectares of commercial plantations were established at Oghe, Oji in the present Anambra State, Mbano in Imo State, 824 hectares commercial plantation was established in Upper Ogun and other parts of Oyo State. Cashew grows in almost all the ecological zones of Nigeria on an estimated hectarage of about 40,000. Of this total hectarage about 24,000ha i.e 60 percent is owned by the peasant farmers, the rest by government agencies.

Despite the importance of Cashew in Nigerian economy and the fact that the crop can grow all over the country, the total hectarage devoted to the crop presently is very low compared to Cocoa which is grown in only few states of the country. The cost of production and maintenance per hectare of cashew is about 50% less, than that of cocoa while the yield and price of processed nuts per metric tonne is twice that of Cocoa (Olunloyo 1996). Several attempts have been made to spur Cashew production by the Federal Government of Nigeria. To this end the Cocoa Research Institute of Nigeria was given the mandate in 1971 to determine the factors affecting production, development of the improved technologies and diversification of it uses in Nigeria. The inclusion of the crop
under the National Accelerated Industrial Crop Production Programme (NAICPP) recently further buttressed the importance of the crop and the determination of the Government to make Nigeria an exporter of Cashew and thereby lessening the dependence on petroleum for foreign earning. This bulletin essentially presents the work carried out by the Cocoa Research Institute of Nigeria, Ibadan

**Uses of cashew**

Cashew is a multipurpose crop. The cashew apple (Fig. 1) contain about 85% juice. It also contains essential vitamins and mineral such as vitamin C, riboflavin and sugar. The juice can be directly consumed and can be made into wine, brandy, alcohol, vinegar, and fruit juice. The nuts are usually roasted and eaten as desert and can be used in confectionery and bakery goods. Other useful products from cashew nut include cashew butter, cooking oil, while the husk is a useful ingredient in livestock feeds. Medically, cashew apple juice has been reportedly used in South America to treat stomach and uterine disorders, vomiting and sore throat (Morton 1961). The extract from the back of the tree is used in the treatment of sore gums toothache, high blood pressure and malaria fever while the extract in combination with inflorescence is used as antidotes for snake bite in India. Industrially, tannins obtained from the kernel cover is useful in tanning industries, while the Cashew nut shell liquid (CNSL) which contains cardol and anaracdic acid is used as wood and fabric preservatives and in the manufacture of paints, plastics, printing ink, germicides, insecticides, water proofing compounds, synthetic resins, antifade agents in brake linings and clutch facing of motor
The bark of the cashew tree produces amber-like gum which is used in book binding and adhesive.

SOIL AND CLIMATIC REQUIREMENT

Cashew can be grown on any type of soil. This is attested to by the fact that the crop are found in all parts of the country. Suitable soils for the crop range from entisols in the South, ultisol in the West, ultisol or oxisol in the East to alfisols in the North (Obatolu, 1996). Most of the soils producing Cashew are light in texture ranging from sandy to loamy sand. Table 1 indicates physical and chemical soil requirement for Cashew production.
Table 1: Physical and Chemical Soil Requirement for Cashew Production.

<table>
<thead>
<tr>
<th>Physical Requirement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>41.2 to 84.4</td>
</tr>
<tr>
<td>Silt</td>
<td>10. to 39.4</td>
</tr>
<tr>
<td>Clay</td>
<td>3.4</td>
</tr>
<tr>
<td>Available moisture content</td>
<td>4.3.</td>
</tr>
<tr>
<td>pH</td>
<td>4.1-6.0</td>
</tr>
</tbody>
</table>

Excess of gravel and clay along profile retard Cashew root growth, and as much as possible this must be avoided. Generally, a well-drained friable deep and medium-textured soils are recommended for Cashew cultivation. However the soil should be able to retain enough moisture during the climatic stress of the long dry season. The plant requires 400-1,500mm of rainfall annually.

SITE SELECTION

Although Cashew can be grown on almost all types of soil in Nigeria, site for Cashew cultivation should be accessible for easy transportation of the produce and fairly flat for various field operations. Site for Nursery Propagation should be near a source of perennial water.

PLANTING TECHNIQUES

a) **Nursery practice:** The materials needed for nursery work include polythene bags, top soil and sand, bamboo stakes, palm-fronds or dry grasses for shade.

   The polythene bags are first filled with the mixture of sand and top and followed by watering: Nuts that will produce
vigorous seedlings are selected by floatation method and should be pre-soaked in water for 24 hours (Esan, 1996). Planting should be done in the polythene bags horizontally as indicated in the Figure 2 and cover with top soil. Watering should be done one to three times a week depending on the relative humidity.

![Polythene Pot, Seed, Soil](image)

**Fig.2 Planting Position**

Shade should be erected so as to prevent scourge of heat on the germinating seedlings. Because of the aggressiveness of cashew, nursery period should not exceed 4 months. Usually planting in nursery starts in January-February and transplanting into the field commences in May-June. The seedling should be hardened up for about 3 - 4 weeks before transplanting into the field. This is done by exposing the seedling to the sun light in the early hours of the day. It takes about 14-20 days for the nut to germinate.

b. **Planting at stake** - Cashew nut can also be planted at stake. In this case viable nuts are selected and planted directly
in the field without nursery practice. When this is done, wire gauge should be used to protect the seedlings from being eaten up by rodents, monkey and other animals. The planting distance of 9m apart is recommended for planting at stake for big expansive canopy or 6.2m apart for small canopy type.

**CULTURAL PRACTICES**

**Field Preparation**
This varies from location to location and the type of cropping system to adopt. In a tropical rainforest zone total clearing of the land and felling of forest trees should be carried out preferably towards the end of the dry season. Levelling may be necessary. However in Savanna area, where there are few scattered trees partial clearing should be done by felling the obstructive trees. Small shrubs which can be conveniently managed should be left on the field.

**Lining:** This follows land preparation. Being a plantation crop, lining is essential for good establishments of the Cashew seedlings. This can be done in two stages.

**Stage I  Blocking of the plantation:** This is done by dividing the whole field into convenient sizeable blocks preferably of 5 to 10 hectares depending on the spacing to adopt. In a small plantation direct lining can be done.

**Stage II  Locating the Planting Sites**
This is done after blocking the field. In this exercise some survey instruments such as ranging pole, measuring chains or tape and pegs to mark the planting sites are necessary. A
base line is adopted at one side of the block in which the planting sites are to be marked at the appropriate distance required for the crop to be planted. Further planting sites are located. After lining has been completed, the planting sites are then pegged for holes. The planting hole should be 60 x 60 x 60cm.

**Planting Materials**

Planting materials for Cashew is usually from selected viable nuts. Both local and exotic selections are available at Cocoa Research Institute of Nigeria, Ibadan and Ministries of Agriculture in various States of Nigeria. The germplasm collections available at CRIN are contained in Table 2.

**PLANTING DISTANCE**

Planting distance for a big canopy should be 9m apart (or 123 stand per hectare) A distance of 6.22 x 6.22m is recommended for a small canopy type. This wide space also serves for intercropping with other crop such as Maize, Plantain or Cassava.

**Transplanting**

Transplanting of seedling into a well prepared field should be done early in the morning or late in the evening to minimize "transplanting shock". Transplanting is usually done between April and June in the south and July in the North when rain has fully established. In the case where seedlings are not raised in Polythene bags, transplanting should be done very carefully so that each seedling should be uprooted with “a ball of earth” (i.e. its surrounding earth) and properly placed in a hole already dug. Since Cashew has very aggressive growth, the seedling does not require any shade on the field.
Table 2: Germplasm Collection at Cocoa Research Institute of Nigeria (CRIN).

<table>
<thead>
<tr>
<th>Location</th>
<th>Germplasm Collections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ochaja</td>
<td>Brazil 244, T12/1, Wyndkeglam 443, A Mandras 1/6, TNO 1, Trichur 1, Brazil 12 UD 185, TAO 40, H3/17, Kottarakara 25, Ullalo 27, Challode FR226, Ogbe 26, Eruwa 48, FR 21wo 222, FR 89, H3, 13, K22-1 BLA 139-1, A Mandras A/61, Mandras 2/61 and Ajakebu Series.</td>
</tr>
</tbody>
</table>

**Intercropping**

One of the advantages for growing Cashew is the potential for intercrop. Several food crops can be grown with Cashew during the early stage of the tree crop. Intercrop is important because:
1. It provides additional income during the gestation period when the tree crop are still to come into production.

2. It promotes efficient use of land;

3. It affords greater total returns on revenue from two or more crops.

4. It suppresses weeds and thereby reduces weeding frequency.

However, certain salient points must be put in mind when embarking on intercropping. The spacing and the root system of the food crops to be intercropped should not be the type that constitute adverse competition or hosts pests and diseases affecting Cashew. As much as possible crops (like cowpea) and similar climbing plants should be avoided. In addition the life span of food crop must fit in between Cashew plant and attainment of the full canopy and whose root does not damage cashew during its harvest.

Fertilizer Application

Generally Cashew is a crop that can grow virtually in all types of soil with little or no addition of fertilizer. However for optimum production, fertilizer application is essential. A Cashew tree requires 500g of Urea, 1,200g single super phosphate and 200g Muriate of Potash per annum. This should be done by making grove round the crop and cover appropriately after placement of fertilizer.
Pruning

Pruning should be done to remove the low branches of the canopy. It should be done also to discourage low spreading branches, which could hinder farm operations. Pruning can also check pests and diseases. It should not be limited only to young cashew, older cashew should also be pruned for the same reasons. Appropriate sharp instruments that could cut off soft and hard wood very readily at a desired angle should be used.

Crop protection Practices

Weed Control

Weeds constitute a serious problem to Cashew production most especially at the initial stage of crop growth. Uncontrolled or improper control of weeds at this earlier stage can lead to loss of seedling stands, reduced growth and delayed maturity with resultant poor yield. Weeds around cashew seedlings can serve as reservoirs for animal pests and disease organisms to which cashew can be vulnerable.

Important weeds commonly found in cashew plantation include: Chromalaena odorata, Euphorbia heterophylla, Tridax procubens, Talium triangulare, Cyprus sp., Mariacus umbelatus, Azonopus compressures and Aspilia sp. Weeds can be controlled by cultural, mechanical and chemical methods. Cultural method includes the use of mulch and intercrop to suppress weed growth. Mechanical method employs mainly the use of cutlass for slashing weeds. About 5 to 7 slashes are required per year to keep weed under check. However with the use of intercrop this can be reduced to about 3 times per annum. In a well mechanised farm where there are
no stumps or obstructing trees interrow cultivator could be used to control weeds. Chemical method is by the use of herbicide. Recommended herbicides for the control of weeds in Cashew include paraquat at 0.56 to 0.60kg a.i/ha and Asulam + tomymil/2, 4-D at 0.40+0.55kg a.i/ha.

Pest Control
Pest control in Cashew commences as soon as the nut is grown either in the nursery or at stake on the field. The common insect pest associated with cashew include, cashew stem girder red-banded thrip, leaf miner, fruit scraper, cowpea bug, trunk and branch borer and leaf rolling giant spider. In addition to these insect pest, rodents cause extensive damage in the nursery and in young plantations as soon as cotyledons appear above the ground. Birds and monkeys also feed on ripe Cashew apples. Table 3 presents major pests of Cashew and their control.

Disease control
Prompt control of disease is a good practice that should be carried out in Cashew plantation. Care must also be taken when intercropping or mixing cashew with other crops as to avoid introducing diseases to Cashew plantation. Major diseases of cashew and their control are contained in Table 4.

HARVESTING
Timely harvesting apart from being the ultimate target of all preceding activities that brings revenue to finance other activities, prevent deterioration of the fruits and nuts which may become unsuitable for processing or consumption. In addition,
the fruits may become contaminated and infected with various germs. The nuts could also be contaminated and may not be viable for planting. Normally harvesting commences as soon as the fruit is mature and ripe, unripe fruits exhibit sour taste as a result of high content of citric acid. When harvesting is purely for the nuts, children and women can be employed to pick the nuts at least 3 to 4 times a week, It is important to ensure that all nuts are properly cleaned of the fleshy parts. Cleaned nuts ensure quality and better revenue. Harvesting of the fruit can be done by hand -picking those on the lower branches while those on the upper branches can be harvested using harvesters - a special modified "go-to-hell" with a bag attached (Fig. 3) to prevent the fruit from falling to the ground. It is however important that the field is weeded before harvesting commences. Harvesting starts in January and last till May. It is important that harvesting is concluded before the peak of rainfall period.

Fig. 3: Go-To-Hell
Table 3: Major Pests of Cashew and their control

<table>
<thead>
<tr>
<th>Pest</th>
<th>Cultural</th>
<th>Chemical</th>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A. trifasciata (Stem girdler)</td>
<td>1. Inspect tree canopy regularly from the end of the rains, for damage symptoms and presence of adults (August-Dec.)</td>
<td>1. Spray the trunk and branches of infested trees to prevent further development of immature.</td>
<td>1. Avoid spraying trees at advanced stage of fruit development or close to harvesting.</td>
</tr>
<tr>
<td></td>
<td>2. Collect and destroy adult beetles and girdled branches.</td>
<td>2. Rogor L40 (30mls) or Basudian 600EC (20mls) per gallon of water are adequate.</td>
<td>2. Harvest mature fruits before spraying. Do not use Gamma 20 EC and related insecticides on fruits bearing trees, in the interest of consumers and non-target organisms. Do not use cassava and cowpea as intercrops.</td>
</tr>
<tr>
<td>2. P. cordata (fruit scraper)</td>
<td>3. Inspect alternate hosts for the presence of adults Take action on nos. 1 &amp; 2 above before the beetles are able to cross over the cashew farm.</td>
<td>3. The two insecticides are also adequate for very young plants.</td>
<td></td>
</tr>
<tr>
<td>3. A. curvipeas (shoot sucker)</td>
<td>1. Inspect cashew leaves thoroughly and regularly during the dry season or drought. 2. Irrigate young plants in the nursery or in the plantation. 3. Intercrop young plants with short, broad-leaf food crops to conserve moisture or keep the farm much cooler than immediate open environment.</td>
<td>Apply Rogor L. 40 at 30mls/gallon of water. Basudian 600EC at 20mls/gallon of water.</td>
<td>1. Harvest fruits before spraying. 2. Do not spray very close to harvesting dates (14 days). 3. Do not use cowpea as intercrops.</td>
</tr>
<tr>
<td>S. rubrocinetus (thrips. leaf feeder)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Arenes spp</strong></td>
<td><strong>Rodents and large animals</strong></td>
<td><strong>Spiders</strong></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>1. Intercrop young plantation with short and broad-leaf food crops to protect soil surface</td>
<td>1. Use simple local traps against rodents.</td>
<td>Spiders are potential enemies (Predators) of some more serious pests of cashew.</td>
<td></td>
</tr>
<tr>
<td>2. Conserve scattered or isolated shrubs during land preparation to provide additional shade.</td>
<td>2. Harvest promptly</td>
<td>Do not apply insecticides in isolated or minor infestation in order to conserve these predators.</td>
<td></td>
</tr>
<tr>
<td>3. Irrigate young cashew plants early in the morning or evening to keep the soil moisture and cooler than immediate open environment</td>
<td>3. Use scarecrow against bats, squirrels and big animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Irrigate the plants overhead using watering can or spraying pump to apply water to the leaf boils and base of plants to dislodge spiders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Untie the leaf boll to dislodge the spiders inside them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mulch base of cashew plants to provide hideouts for the spiders.</td>
<td>Spray young plants in the nursery and in the plantation, as soon as cotyledons emerge above ground with insecticides listed above.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Idowu (1996)

1. In serious outbreak, protect the young plantation with Gamalin 20EC at 6mls per gallon of water after irrigating. Spray once a month if infestation persists.
<table>
<thead>
<tr>
<th>Name of disease</th>
<th>Causal agents</th>
<th>Symptoms manifested</th>
<th>Control measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inflorescence blight diseases</td>
<td>Lasiodiplodia theobroma</td>
<td>Withering of the petals and other parts of flowers followed by a progressive die back of the main inflorescence stalk</td>
<td>Application of one spray of combination of Benlate and Rogor at the rate of 1.5gm/L and 1.0gm/L respectively before full bloom.</td>
</tr>
</tbody>
</table>
| 2. Rot of developing cashew nuts | a. L. theobroma
b. Aspergillus tamari
c. Penicillium citrinum | Immature nuts producing sugary exudate become infected. Infected immature nuts later turned black and dry. | Spray with combination of Benlate and Rogor at the rate specified in (a). |
| 3. Rot of pseudoapples          | a) Geotrichum candidum
b) Mucor spinosus
c) Penicillium citrinum
d) Aspergillus sp
e) Fusarium sp. | Pseudoapple infection usually starts following wound created by sucking and piercing insects. Apple later becomes shrivelled and dark brown in colour. | Harvest early. |
| 4. Leaves spot disease of cashew seedlings | Curvularia senegalensis | Leaf spot is preceded by intervenial chlorosis induced by iron deficiency. Leaf spots appear as pin heads which later enlarge irregularly. Severe leaf spotting gives the leaf small-pox appearance. | Application of iron chelate farriplex to the soil at the rate of 50kg hectare. |
| 5. Leaf blight of cashew         | Pestalotia paconiae                | Disease is manifested on the upper surface of leaves in the form of minute, brown, circular spots. The spots may coalesce covering large area of the lamina and bearing numerous acervuli of pestalotia paconiae. | Spray with 1.5% Difolatan. |
| 6. Red rust of cashew | Cephaluro s cyroides | A parasitic algae attacking mature leaves. Rust appears as raised dark patches on leaves. The patches later turn red in the form of hair-like fructification of the algae. Cell content of the algae is orange-red hence the name red rust. | Spray with 1.5% Difolatan. |
| 7. Root rot of cashew seedlings | **Pythium ultimum** | Primary symptoms are yellowing of lower leaves of seedlings of 4 to 6 weeks old. Conspicuous stunting of seedlings with rotted root systems. | Application of Dexon (p-dimethylamino-benzenediazo sodium sulphonate) to the soil at the rate of 113.6kg/ha. |
| 8. Storage diseases of harvested nuts |  
|  
| i) Paecilomyces variotii  
| ii) Aspergillus niger  
| iii) Fusarium sp.  
| iv) Penicillium sp. | Mouldiness of invasion by a complex of fungi favoured by high relative humidity in the storage room. Nuts lose viability in return. | Store nuts in dry and well aerated place.  
| 9. Kernel rot of | a) Aspergillus flavus | Affected kernels become deep brown. | Hygienic methods of storage of... |
PROCESSING
Cashew Apples:
Various products can be obtained from cashew apple such as jam, fruit juice, wine, spirits, alcohol, vinegar, and candies.

Equipment for cashew wine and juice Processing:
All equipment should be made of stainless steel. The equipment are:
1. Screw press (for extraction with 60 mesh screen)
2. Mixing tanks with steam
3. Barrel (stainless steel or plastic drum) for fermentation
4. Pasteurizer
5. Refrigeration tanks or cool rooms for storage
6. Air lock
7. Bottles
8. Hydrometer (both for sugar and alcohol)

Wine Processing
For quality wine production cashew fruit should be harvested as soon as it is ripe on the tree. The steps involved in the processing of cashew wine include:

a. harvesting of the apple
b. preparation of the juice;
c. preparation of yeast starter
d. fermentation;
e. racking;
f. storage and aging
g. bottling and pasteurization

The fruits are cleaned after harvesting and the juice is expressed by screw or basket press. Contact of the juice with
either cloth or iron materials should be avoided. Yeast is added to the juice and allow to ferment for 7 to 10 days. The alcohol content can be increased from 4 - 5% to about 20%, by addition of sugar before fermentation. The fermented juice is the wine which should be racked and preserved either chemically by adding preservatives such as sodium metabisulphite or by pasteurization. The wine should be allowed for a period of 5 months before consumption. Spirits are easily obtained by distilling the fermented juice, See figure 4 for flow chart.

Fruit juice Processing:
The juice can be extracted either by screw or basket press as earlier mentioned and astringency removed by addition of gelation. Gelative solution is added to precipitate the tanning and strained through the muslin-cloth. Sugar is added to taste. The juice from cashew is rich in vitamin C, Calcium, Phosphorous, Riboflavin and iron. Pasteurization of Cashew juice is done by boiling the juice to boiling point of 90 - 95% and immediately afterwards poured into sterilized warmed bottles and cock. It can also be preserved chemically as earlier described under wine processing. See fig. 5 for flow chart.

Jam Making
Special attention is required for jam making. The fruits for jam making must be extremely void of any damage or contamination. The fruits are first immersed in 2% salt - water solution for three days to lower the tannin content and then steamed for 10 - 15 minutes at 10 to 15 pressure. The steamed apples are then crushed and mixed with equal weight of sugar and boiled. Add citric acid to improve the taste when the jam is
about to cool down. The product which is now jam is poured into clean sterilized bottle to set.

**Processing of the Nuts.**

Drying is the first and immediate treatment given to cashew nuts after harvesting of the nuts. Drying is usually accomplished when the nuts are exposed to the sun. This drying processing reduced the moisture content of the nut for better storage. For a quality kernel, the moisture content of the nut should not exceed 9.1%. When drying cashew, the nuts should be spread out on concrete floors, mats or tarpaulins for at least four days. The nuts must be well spread out such that the layer should not be constantly raked in order to ensure even distribution of sun's rays.

**Storage:**

For good nut storage the following steps must be followed.

1. The floor should be of concrete type

2. Adequate and proper roofing must be ensured to prevent any leakage

3. The storage room must be spacious, so as to allow for easy manipulation of bags either in the stacking or during removal.

4. The store must have adequate provision for inspection

5. There must be a raised platform made of plank
between the floor and the bags and well ventilated for air circulation.

Additionally adequate provision must be made to prevent pests from damaging the nuts. If the nuts are going to be stored for a long period of time, it may be necessary to occasionally bring the nuts out to the sun. While in the store, regular inspection is important.

Fig. 4: Flow Chart for Cashew Juice preparation
Cashew Apple

Preparation of Juice

Addition of Gelatin

Strain with Muslin Cloth

Add sugar

Pasteurisation or addition of preservatives

Bottling

Fig. 5 Flow Chart for Cashew Fruit Juice Processing.
Fig. 6 Flow Chart for making Cashew Jam
Utilization:

The kernel is the main product of the cashew industry which is extracted whole from the nuts without contamination with the cashew nut shell liquid (CNSL). At present in Nigeria cashew industry is limited to the exploitation of the nut for the kernel and in a few cases for CNSL, while the apples are simply sucked, and some good percentage of the nuts roasted and consumed. The cashew kernel oil is comparable to other edible oil such as palm oil, groundnut oil and cocoa butter which is good for cooking and industrial uses.

Table 5 shows the chemical characteristics of cashew nut oil. The cashew nut oil is more stable at 80°C than corn and groundnut oil. The meal obtained from the residue contains about 40% protein which can be used to fortify local food and livestock feeds.

Table 5: Chemical characteristics of Cashew nut oil.

<table>
<thead>
<tr>
<th></th>
<th>Crude</th>
<th>Degummed</th>
<th>Degummed and Bleached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorophyll ppm</td>
<td>8.60</td>
<td>-</td>
<td>8.50</td>
</tr>
<tr>
<td>Iodine value</td>
<td>97.28</td>
<td>95.68</td>
<td>90.86</td>
</tr>
<tr>
<td>Free Fatty Acid</td>
<td>1.72</td>
<td>1.18</td>
<td>1.07</td>
</tr>
<tr>
<td>Diene value (poly mensed) oil by heating at 80°C for 5 days</td>
<td>40.42</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

MARKETING

Marketing is a vital component of cashew industry. There are at least three main features of cashew marketing which include:

1. Individual buying agents who move from one village to the other and buy the cashew nuts from the farmer in bulk and later deliver the nuts to licensed buying agent.

2. The cooperative farmers' group who collect cashew nut from their members and deliver to the cooperative Unions who sell them to cooperative exporters or licensed companies for export.

3. Some export companies buy through their field offices in all cashew producing centres. Marketing of cashew is highly organised and fairly efficient which makes cashew farmer to receive much higher price for their cashew nuts than when there was no organised marketings system. At present a tonne of fresh cashew nut sells for N25,000 (Olunloyo 1996). The channels for exporting cashew in Nigeria include:

a. Large companies with procurement base at the grassroots level in Nigeria and an international marketing set up overseas;

b. International companies in the commodity business with representative office in Nigeria.

c. Companies based in Nigeria, having established long-
term rapport with overseas buyers;

d. New or smaller exporters and trade having a procurement set up at roots level which feed other larger exporters mentioned in (a) and (b).
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Appendix I.
Processing Factories
Listed below are five of the established cashew nut processing industries producing roasted nuts with different installed capacities:–

1. Premier Cashew Processing Ltd.,
   Akama, Oghe,
   Enugu State.
   Capacity: 1500 tonne/Annum.

2. Cashew Nut Processing industries Ltd.,
   Eleiyele, Ibadan.
   Capacity: 800 Tonne/Annum.

3. Reliance Factory Ltd.,
   Agege, Lagos.
   Capacity: 750 Tonne/Annum.

4. Asafra International (Nigeria) Ltd.,
   Owerri, Imo State
   Capacity: 100 Tonne/Annum.
5. JOF Ideal Family Farm Ltd.,
Plots 6 & 8 Light Independent Estate,
Benin - Owo Express Road
Owo,
Ondo State.

Capacity: 750 Tonne/Annum.