

# HOW TO ESTABLISH A CASHEW ORCHARD





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Proper establishment of a cashew orchard enables appropriate management, optimization of returns and sustainability of cashew production.



### Land preparation

#### ***Site selection for cashew production***

Characteristics of a suitable site for cashew production include:

- a) Ideal soils for cashew production soils should be deep (more than 2 metres)
- b) Cashew thrives in well-drained and light textured soils (sandy to sandy loam). The site should have proper drainage and no water stagnation during rainy season
- c) Rocky grounds are not suitable since they impede root development. However, cashew can grow in soils with up to 30% gravel
- d) Topography of the land should be relatively flat. Cashew can be established on slopes not exceeding 30% with proper soil and water conservation measures.

## Preliminary operations

After selecting the suitable location and site, some preliminary operations have to be done.

- Soil testing to confirm suitability for cashew production and ascertain of any soil amendment that may be necessary
- Trees are felled, and the stumps and roots removed.
- The shrubs and other weedy growth are also cleared.
- Deep ploughing is essential to remove big roots.
- The land should be thoroughly ploughed, levelled and manured

In hilly areas, the land should be divided into terraces depending upon the topography of the land and the levelling is done within the terraces. Terracing protects the land from erosion. If the soil is poor, it would be advisable to grow a green manure crop and plough it in so as to improve its physical and chemical conditions before planting operations are taken up.

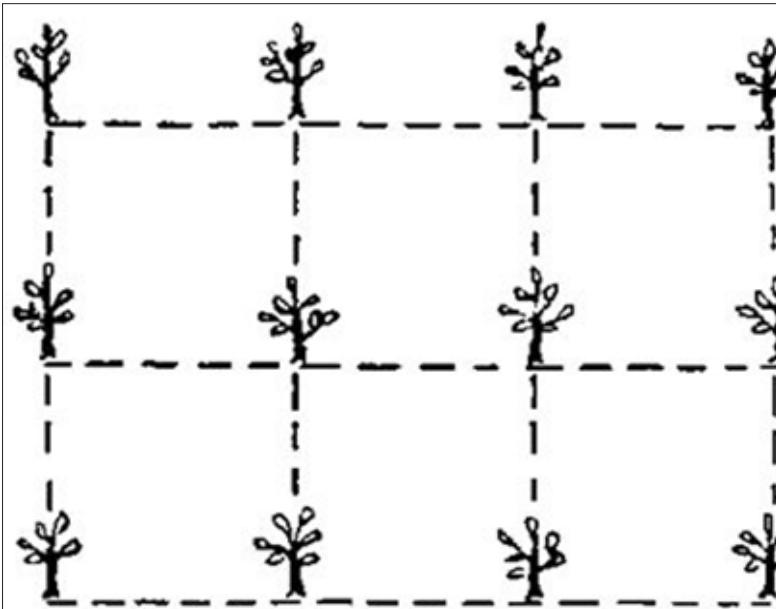
## Planning of the cashew orchard

A careful plan of the orchard is necessary for the most efficient and economic management. The following factors should be considered in planning the cashew orchard:

- Optimum spacing to accommodate maximum number of trees per unit area.
- Stores and utility buildings appropriately located for proper supervision.
- If irrigation is to be done, water source(s) should be located at convenient places.
- Irrigation channels should be laid along the gradients for most economical conduct of water
- Each variety should be assigned a separate block.
- A good fence is essential.
- Wind breaks - rows of tall trees planted close together around the orchard, are essential.

## Laying out of the orchard

Any method of layout should aim at providing maximum number of trees per hectare (at the recommended plant spacings), adequate space for proper development of the trees and ensuring convenience in orchard management practices. The system of layout can be grouped under two broad categories:



### (a) vertical row planting pattern

In this planting pattern (e.g. square system, rectangular system), the trees set in a row is exactly perpendicular to those trees set in their adjacent rows.

#### i) Square system

In this system, trees are planted on each corner of a square whatever may be the planting distance.

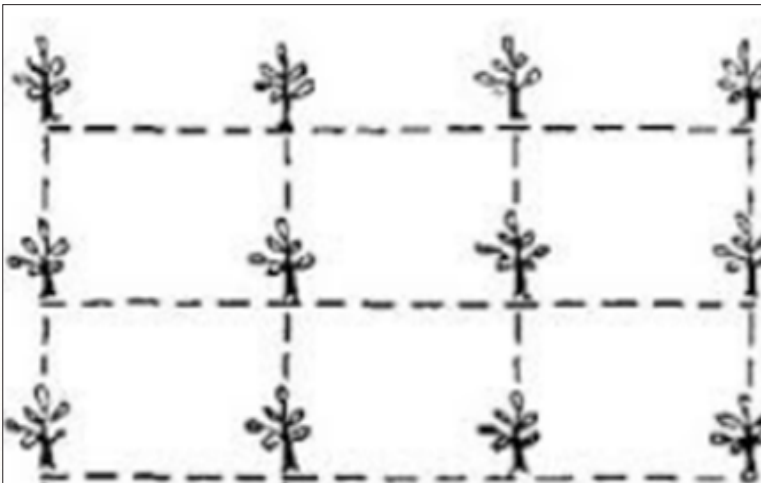
- The central place between four trees may be advantageously used to raise short lived nurse crops.

- This system permits intercropping and cultivation in two directions.
- This planting system is commonly followed as it is easy to layout, and inter-cropping and cultivation is visible in two directions

## ii) Rectangular system

- This system is similar to that of the square system in its layout except in this layout row to row and plant to plant spacing is not same
- In this system, trees are planted on each corner of a rectangle. As the distance between any two rows is more than the distance between any two trees in a row.
- The wider alley spaces available between rows of trees permit easy intercultural operations and even the use of mechanical operations.

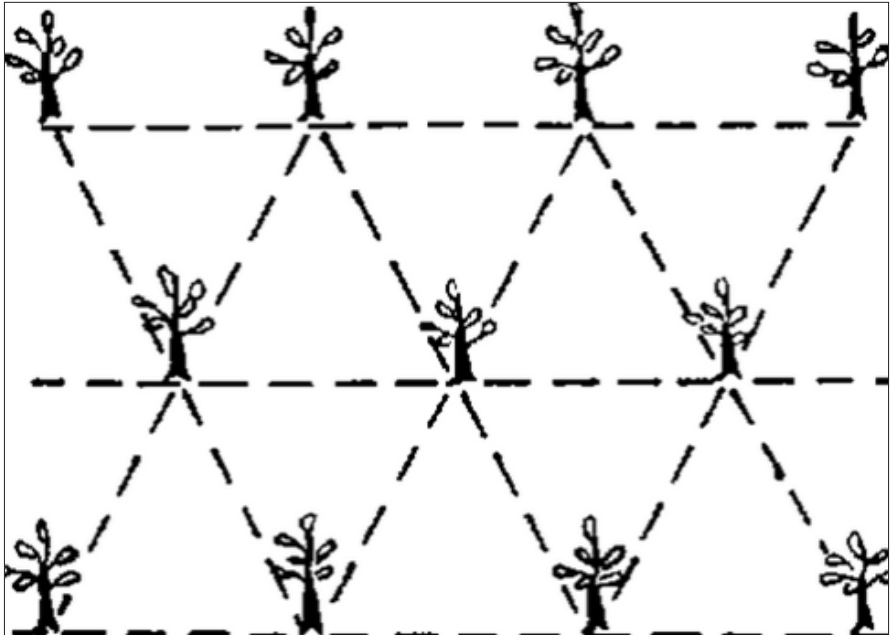
### Illustration of rectangular pattern



### (b) Alternate row (Triangular) planting pattern

In this planting pattern (i.e. Triangular), the trees in the adjacent rows are not exactly vertical instead the trees in the even rows are midway between those in the odd rows. The distance between the rows is the same or more than that in row

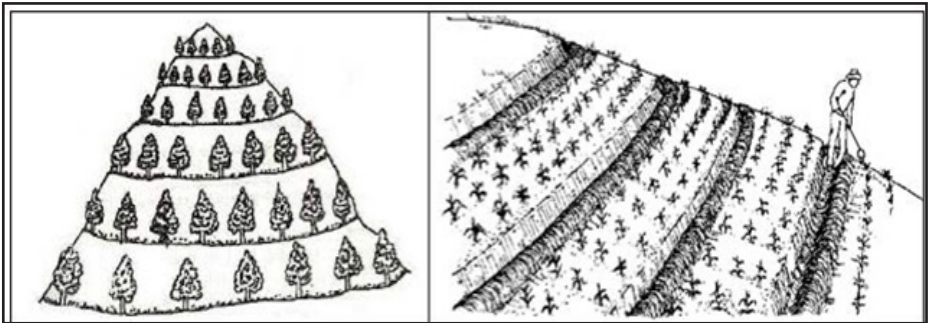
## Illustration of triangular pattern



### c) Contour system

It is generally followed on hilly areas. In this system, the trees are planted along contours across the slope. The main purpose of this system is to minimize land erosion and to conserve soil moisture so as to make the slope fit for growing fruits and plantation crops. The contour line is so designed and graded in such a way that the flow of water in the irrigation channel becomes slow and thus finds time to penetrate into the soil without causing erosion.





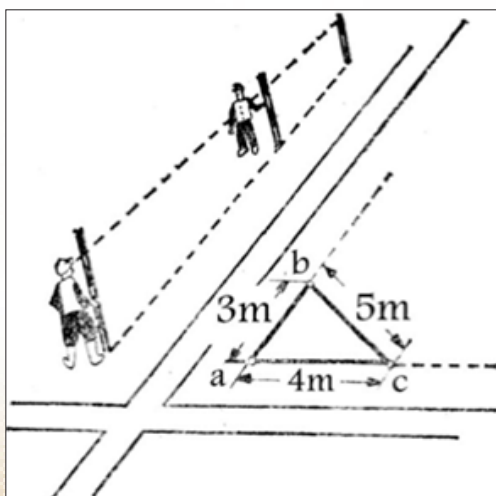
## Illustration of contour system

### Orchard establishment

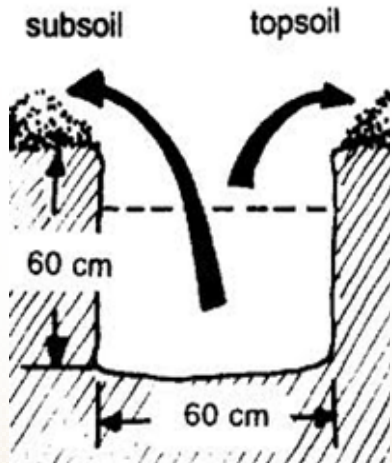
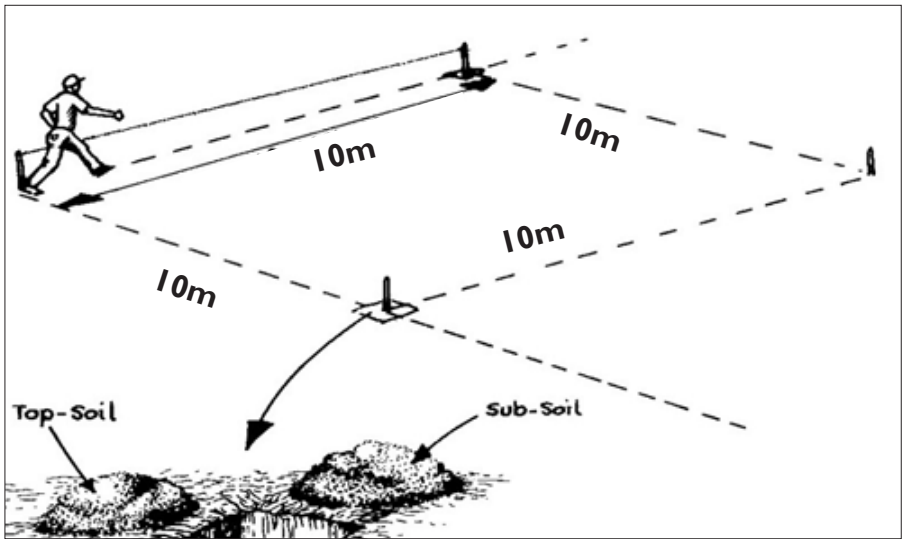
Preparations for orchard establishment include:

- Assembling all the necessary equipment including measuring tape, sisal twine, digging hoe (jembe), shovel, wheelbarrow, hammer and wooden pegs.
- Assembling all the necessary materials including manure and fertilizer, watering can and water.
- Identifying a source of approved quality planting material (grafted seedlings) is important for good production/high yields.

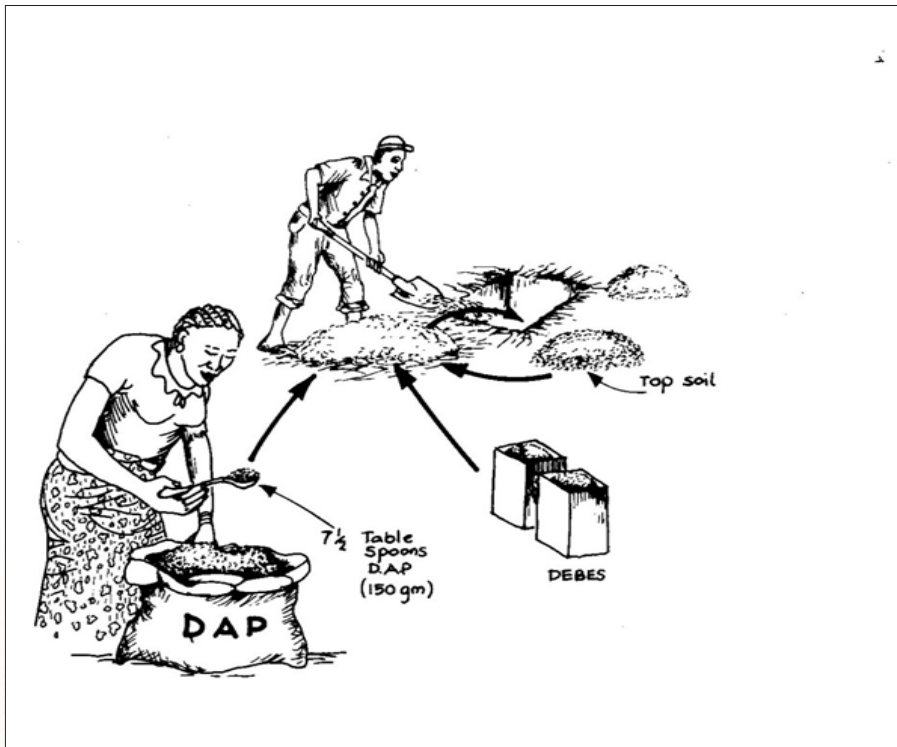
### Establishing a baseline (starting position)



# Farm Layout and digging of planting holes-Spacing of 10m by 10m



- Ideal size of holes is 2ft x 2ft x 2ft (60cm x 60cm x 60cm). While digging, the upper one foot of top soil is separated from the lower one foot sub-soil
- The one foot top-soil is then thoroughly mixed with:
  - A debe of well decomposed farm yard (FYM) manure
  - 150g of DAP
  - Any effective soil nematicide
- Return the soil media into the hole



**Illustration of mixing top soil, manure and fertilizer**

### Transplanting

- Carefully remove the potting bag without disturbing the roots
- Plant in the centre of the hole
- The seedlings are planted while maintaining the nursery soil level

on the stem.

- The trees are irrigated soon after planting - this consolidates the soil and helps the roots to establish contact with it and to secure a supply of water quickly.
- A small basin may be made around the tree for this purpose
- Plant at the beginning of rain season and most preferable at the late hours of the day.
- Cover with mulch after planting



## **Demonstration of cashew planting**

### ***Taking care of newly established orchard***

- Watering especially during dry season
- Mulching can be done around the plant to conserve moisture and to suppress weeds
- Weeding: Young cashew trees are particularly weak competitors with weeds. Therefore, the new orchard should be kept weed free
- De-suckering: Removal of any branches that shoot from the rootstock (the part below the graft union)







**Compiled by:** Menza M. K, Muniu F.K., Pole F.N., Mwashumbe S.K  
., and Ondiko C.N

**Editors:** Nyabundi K.W., Mukundi K.T., Maina P., Wanyama H.N.,  
Kedemi R.M. and Biegon A.C.

**Design and Layout:** Odipo S.N.

**For more information contact:**

The Institute Director  
Industrial Crops Research Institute,  
P.O. BOX 16-80109 Mtwapa, Kenya Tel: 0202024751,  
Email [Director.icri@kalro.org](mailto:Director.icri@kalro.org)  
Website: [www.kalro.org](http://www.kalro.org)  
KALRO Call Centre 0111010100

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