

4.6. Realignment/remarking of planting holes

After refilling the holes, the planting positions should be realigned by sticking the wooden pegs at the centre of the hole so as to conform with the coffee spacing.

4.7. Planting

After the rains have set in and soil is wet to a depth of 60cm (2ft) open the soil mould sufficiently to accommodate the top roots and other roots.

- Carefully remove the poly bag before planting.
- Maintain the root zone of the seedling to avoid either deep or shallow planting.
- Fill in the soil and press the soil firmly.

4.8. Mulching

Mulching consists of covering the soil with 15cm loose layer of straw, banana leaves, grass or dead weeds.

- Mulch should not come into contact with the stem of the tree.
- Apply a continuous 60cm (2ft) band on either side of the tree during the first two years.

4.9. Weed management

It is recommended that where the coffee is not mulched, the ground has to be kept weed free either by cultural methods (slashing and digging) or chemically using herbicides.

4.10. Training of young coffee

Six months old plants in field are pegged down

towards where the sun sets (East – West) at about 45 degrees to stimulate production of suckers. Three suckers are selected to form the bearing stems from the base of the trained seedlings, the first about 20-30cm from the ground level and the other on the next node. The suckers should be 30cm tall.

4.11. Coffee Harvesting Times

Each year coffee is harvested during the dry season when the coffee cherries are bright red, glossy, and firm. Ripe cherries are either harvested by hand, stripped from the tree with both unripe and overripe beans, or all the coffee beans are collected using a harvesting machine. These processes are called selective picking, stripping, and mechanical harvesting, and respectively.

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18th Seeds of GOLD
**Farm
Clinic**

CLIMATE SMART FARMING

**ARABICA COFFEE
ESTABLISHMENT**

**7TH /DEC/2019
BUGINYANYA ZONAL AGRICULTURAL
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ARABICA COFFEE ESTABLISHMENT

1. Introduction

Being a perennial plant, coffee should be properly established so that it can have a long and productive life span. Properly established coffee plants result in high yields and good quality. To achieve this, various aspects are recommended.



Farmer ring weeding well flowered Arabica coffee

1.1. Ecological requirements of Arabica coffee

Arabica coffee requires altitude of 1400m-2000m (4500ft-6800ft) above sea level. Soils should be free draining to a depth of at least 1.5m, high water holding capacity, slightly acidic with pH range 4.4-5.4 (0.01m cacl 2 method) or rainfall should range between 1000mm (35")-1145mm (45"). Where coffee is grown under conditions of minimum rainfall, mulching is essential to conserve the moisture.

2. Varieties

- 2.1. **SL 14:** High to medium coffee zone areas with good rainfall and without serious leaf rust.
- 2.2. **SL 28:** High to medium coffee zone areas without serious leaf rust.
- 2.3. **Bugisu local:** For both high to medium coffee zone areas. Tolerant to leaf rust.
- 2.4. **KP 423:** For medium coffee zone areas with serious leaf rust.
- 2.5. **Ruiru II:** For all coffee growing zones, resistant to leaf rust and CBD.
- 2.6. **Catimors:** For medium coffee zone areas. Resistant to leaf rust but highly susceptible to coffee berry disease.
- 2.7. **KP 162:** For high to medium coffee zone without serious leaf rust.

3. Site selection

Land slope: Ideally, the land should be level or gently sloping where the soils are not easily eroded and mechanical operations can be carried out with ease.

4. Land preparation

Land preparation for coffee planting should be done well in advance and preferably during the dry period. The operations to be undertaken during land preparation are:-

- 4.1. **Clearing and ploughing:** The land should be cleared and tree stumps removed. During ploughing, difficult perennial weeds e.g. couch grass (*Cynodondactylon*), Kikuyu grass (*Pennisetum clandestinum*) etc should be removed otherwise they can be a major

problem to the established coffee if left uncontrolled.

- 4.2. **Pegging/marking:** The planting positions in the farm should be marked by the use of wooden pegs in accordance with the spacing of the coffee variety or type to be planted e.g.

SL 14	- 2.44m x 2.44m (8ft x 8ft)
Bugisu local	- 2.44m x 2.44m (8ft x 8ft)
KP 423	- 2.44 x 2.44 (8ft x 8ft)
Ruiru II	- 2m x 2m
Catimors	- 2m x 2m

4.3. Soil sampling

Soil sampling of the farm should be done so as to advise on what fertilizer and rate of application to be used.

4.4. Planting holes

Holes should be dug three months before planting to allow the weathering of the hole. The hole size should be 60cm x 60cm (2ft x 2ft). When digging the hole, the top soil and sub-soil should be placed separately.

4.5. Refilling the holes

The planting holes should be refilled with top soil mixed with a 20 litre debe, jerrican of farm yard manure or well decomposed coffee pulp, phosphatic fertilizer (100gm DSP/TSP or 200gm ssp) and Furadan 20gm of Furadan 59 or 10gm of Furadan 109. The holes are refilled one month before planting time, making a mould to allow for level settling of the soil in the farm.