



# FMB Technical Bulletin No. 4

## SPECIFICATIONS/STANDARDS FOR NGP'S HIGH VALUE CROPS: CACAO, COFFEE AND RUBBER

The use of good quality planting materials cannot be overemphasized in the quest to make reforestation activities successful. A number of factors are also considered like soil characterization to ensure tree species are compatible with soil type, elevation of planting sites and respective climate and also the use of organic inoculants. There is a higher percentage of survival at this critical stage as well as greater productivity when planting materials is carefully chosen.

This is especially significant in the case of NGP high value crops like cacao, coffee and rubber whereby the survival of seedlings and the quality of plantations is diligently monitored because of the huge opportunity to help communities in livelihood activities as well as pursue the country's economic development.

This Technical Bulletin enumerates the specifications/standards to follow in order to have quality cacao, coffee and rubber planting materials. It also sets the parameters in planting the value crops.

Prescribed Technical Specifications/Standards in Producing and/or Procuring Cacao Seedlings	
a) Asexually produced	• Grafted or budded. Use scions with 2-3 bud eyes for grafting.
b) Minimum height for planting	• At least 0.5 meters plant height
c) Minimum age for planting	• 5.5 to 6 months old hardened seedlings
d) Minimum number of leaves of plantable seedlings	• Minimum of 6 to 8 matured leaves per seedling, without flushing upon delivery
e) Seedling source	• National Seed Industry Council Registered Clones
f) Stem size	• 4-5 mm or pencil size
g) Plastic Bags/Polyethylene	• Should be 6 x 10 inches in size

Parameters for Planting Cacao	
Recommended spacing & planting stock per hectare for monocrop	• Distance should be 3m x 3m or 1,100 seedlings per hectare
Recommended spacing & planting stock per hectare for intercrop	• Under Coconut – 2 rows of Cacao at 3m x 3m or a density of 650 to 800 trees /ha • Under Banana and Madre de Cacao – 3m x 3m or a density of 1,000 trees /ha • Distance should be 6m x 6m for shade trees
Recommended species for intercrop	• Coconut, Madre de Cacao, Cardaba Banana
Recommended altitude per spacing	Up to 1,000 meters above sea level • For 800 meters below, distance should be 3m x 3m • For areas above 800 meters to 1,000 meters, distance should be 4m x 4m
Site requirements	• Adoption of micro catchment technology for sites up to 40% slope

### Prescribed Technical Specifications /Standards in Producing and/or Procuring Robusta Coffee Seedlings

a) Asexually produced	• Ready to plant coffee selections
b) Minimum height for planting	• 1.5 feet
c) Minimum age for planting	• 6 months old
d) Minimum pairs of leaves of plantable seedlings	• 6 pairs of leaves
e) Seedling source	• Certified Bureau of Plant Industry Accredited Nursery • Registered with the NSIC
f) Plastic Bags/Polyethylene	• Should be 6 x 8 inches in size

### Parameters for Planting Robusta Coffee Seedlings

Recommended spacing & planting stock per hectare for monocrop	• Distance should be 2m x 3m or 1,667 seedlings per hectare • For 1,000 seedlings per hectare, distance should be 2m x 5m
Recommended planting stock per hectare for intercrop	• Under Coconut or agroforestry/forest trees – 500 to 800 seedlings/hectare depending on the planting distance and kinds of species of existing tree before planting coffee

### Prescribed Technical Specifications /Standards in Producing and/or Procuring Rubber Seedlings

a) Asexually produced	• Ready to plant rubber selections
b) Minimum height for planting	• 1.5 feet
c) Minimum age for planting	• 6 months old
d) Minimum leaves of plantable seedlings	• Minimum of 6-7 petioles / main stem

### Recommendation for Planting Rubber Seedlings

Recommended spacing & planting stock for monocrop	• 6m x 4m or 416 seedlings • 6m x 3.5m or 476 seedlings • 7m x 3m or 476 seedlings
Site requirements	• Plain or undulating • Good drainage • Loam or clay loam soil • 5.0 – 6.0 soil pH

### Prices of seedlings inclusive of transportation cost

Cacao	25
Robusta Coffe	20
Rubber	35

