Rooting cuttings

Harvest suckers from the mother gardens at pencil thick size stem. Select semi-hard nodes with internodes of the suckers (2-3 per stem). Cut theselected internodes about ½" above the upper node. Trim the lower end of the cutting at an angle leaving 7-9cm of the lower internodes. Thoroughly water the media in the poly pots. Dip the cut end of the cuttings into semi-hard wood rooting hormone (seradix 2) before planting into pots. Plant the cutting into the pots leaving the upper node at least 2 cm above the media. Slightly compress the media around thecutting. Water media in the pots again and cover them tightly with polythene sheet. Use polythene sheet of gauge 800-1,000 for covering the cuttings. Leave the cuttings covered under polythene for 2 months to allow callus formation and root development. Build cages over the pots and cover tightly with polythene sheet over the cages.

Occasionally open the cages to water pots and replace the polythene soon after watering. Leave the plants in poly pots under cages for at least 3 months.



CUTTING READY FOR PLANTING



PLANTING CUTTINGS IN POTS

Hardening rooted cuttings

Open the cages living the plants in the same positions for at least one month. Transfer the plants after the 3 months into hardening shade. Harden the plants for at least 2 months before they are ready for planting in the field. Sort deformed plants before planting.

Weed management

Weeds in pots should be pulled out by hand. Control weeds within the nursery shade and any areas close to the coffee plants using hand hoeing. Control weeds around the shades by slashing; hoe weeding or applying herbicides such as roundup.

Pest control

Control insect pests in the nursery by spraying with general-purpose insecticides, such as sumithion, when you see insect damage on young plants.

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NaCRRI

Uganda Coffee Development Authority

USAID FROM THE AMERICAN PEOPLE

CLONAL COFFEE NURSERY MANAGEMENT.



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Introduction

Management of clonal coffee nursery practices are similar for Arabica and Robusta coffee. The practice involves raising planting material by vegetative propagation from nodal cuttings. In Uganda this method is used for commercial propagation of the previous six commercial Robusta clones and all CWD resistant lines. It can also be used to propagate Arabica coffee clones and clones of other tree crops when necessary

Use only recommended clonal varieties. Previously recommended clonal Robusta coffee varieties are 1s/2, 1s/3, 1s/6, 223/32, 257/53 and 258/24 but they are susceptible to CWD. Recommended CWD resistant varieties are Kituza R1, Kituza R2, Kituza R3, Kituza R4, Kituza R5, Kituza R6 and Kituza R7. Currently there are no recommended clonal Arabica coffee varieties except materials cloned for experiments only.

PARENT CLONE STOCK

Obtain parent stock of the recommended clones from right sources recommended by COREC and UCDA for establishing mother gardens.

ESTABLISHING MOTHER GARDEN

A commercial nursery operator should have a mother gardens. Site the mother garden on a gently sloping fertile ground.

Prepare seedbed following procedures used in preparing seedbeds for establishing coffee gardens. Mark the field at 1m x 1m and in straight line/rows. Dig holes of 2 feet wide and 2 feet dip at marked spots. Plant the mother bushes following procedures recommended for planting clonal coffee gardens.

MAINTENANCE OF MOTHER GARDENS

Control weeds in the mother gardens by alternating hand hoeing and slashing. Spray with herbicides such as Roundup to control perennial weeds. Spray with general-purpose insecticides such as sumithioin to control insect pests. Train the mother bushes by bending young mother bushes along rows to induce multiple sucker production. Train the plants when they are 6 months old. Apply organic fertilizer such as composed animal manure, crop residue etc. or inorganic fertilizer, (NPK or CAN) to enhance the production and growth of suckers.

NURSERY SHADES

You must have shades for rooting and raising rooted cuttings. A coffee nursery should be easily accessible for regular supervision, close to a good supply of non-salty water, on a gentle slope to avoid water logging and protected from strong wind. Construct shades allowing in 10-20% light for rooting using local materials (grass, dry banana leaves etc) or commercially available fibreglass Construct shade allowing in 25-50 light for raising and hardening the rooted cuttings using local materials or fibre glass.



Rooted cuttings in the cage



Hardening young coffee plants

Clonal planting materials must be raised in poly pots. Use appropriate pots for raising rooted cuttings. Use pots of 5" x 7" (width x height). Also use appropriate potting media for raising rooted cuttings. The potting media should include humus rich (forest) soil, lake sand and decomposed saw dust. First fill pots with the humus rich (forest) soil to ¾ way. Top the forest soil with a 1:3 mixture of lake sand and saw dust. Arrange the pots within the rooting nursery shade in rows allowing movement of personnel.