



USAID
FROM THE AMERICAN PEOPLE



Volunteer Name: Dr. Dilip Nandwani

Country: Kenya

Country project:

Host: Good Neighbors Enterprises

Venue: Good Neighbors community members

**Audience: Secondary School Students, Good
Neighbors Community Project staff**

Number of people : 216

Date: July 3-18, 2016



1. Assignment Objectives as in SOW

**Improvement of grafting techniques in
macadamia and other fruit trees**

2. Achievement of the assignment objectives

Hands on training, demonstration and lectures to (216) members of the Good Neighbor Community Project staff, farmers:

1. Side wedge grafting procedure demonstrated in macadamia, side veneer in mango and cleft in avocado. Tips and factors for successful grafting discussed.

Beyond Assignment

2. Powerpoint presentation on fruit trees propagation with examples of macadamia, mango, avocado, passion fruit, papaya, citrus by seeds, layering, micropropagation, division, grafting

3. Pruning in fruit trees, importance and benefits with emphasis on macadamia taught and demonstrated

Beyond Assignment

4. Home tissue culture
5. Botanical pesticides demonstration such as neem leaf extract for insect pest and disease control
6. Pruning in fruit trees, importance and benefits with emphasis on macadamia taught and demonstrated

3. Recommendations to the host with regards to the assignment

7. Micropropagation (tissue culture) of banana and establishment of home tissue culture techniques

8. Macadamia orchard management in the Bungoma county.

9. Sanitization: Surface sterilization of grafting tools, labeling of rootstocks and scions.

3. Recommendations to the host with regards to the assignment

10. Use of resistant varieties in papaya, banana and other fruit crops.

11. Selection of scion, management of macadamia orchard, weeding, labeling trees

4. Anticipated Impact

- Increase in knowledge and skills in grafting, fruit trees propagation
- Increase in knowledge in papaya diseases, vegetables (bell pepper) and tissue culture techniques
- Pruning in fruit trees inspired and motivated local farmers to manage their crops and orchard management

5. Recommended future volunteer Assistance

- **Horticulturist or pomologist**
- **Agricultural Economist**
- **Entomologist/Pathologist for vegetables and tropical fruits**

Action plan for host recommendations

Recommendation	Specific Action	Responsible person	By when
1. Identify names of varieties and source of macadamia seeds for rootstocks and scions	With the assistance from KARLO, Thika label trees in the orchards and seeds	Anthony Wanga	Immediately after completion of training
2. Label grafted rootstocks in the nursery	Write variety names of rootstock & scion, date of grafting on the labels	Anthony Wanga	Immediately after completion of training
3. Seed bed preparation and planting of macadamia seeds	Maintain in-row and between row spacing for seeds (2 inch between seeds)	Anthony Wanga	Immediately after completion of training
4. Weeding	Remove weeds manually (by hand) in seed beds and grafted rootstock bags	Anthony Wanga	Immediately after completion of training
5. Orchard management	Site selection, drained soil, watering and slopes be consider before establishment of new orchard.	Anthony Wanga	Immediately after completion of training
6. Grafting technique, apply paint	Practice side-wedge grafting and paint after pruning the limb to avoid disease infestation.	Anthony Wanga	Immediately after completion of training

7. How can CRS improve future volunteer experience

Nothing specific

- Well organized

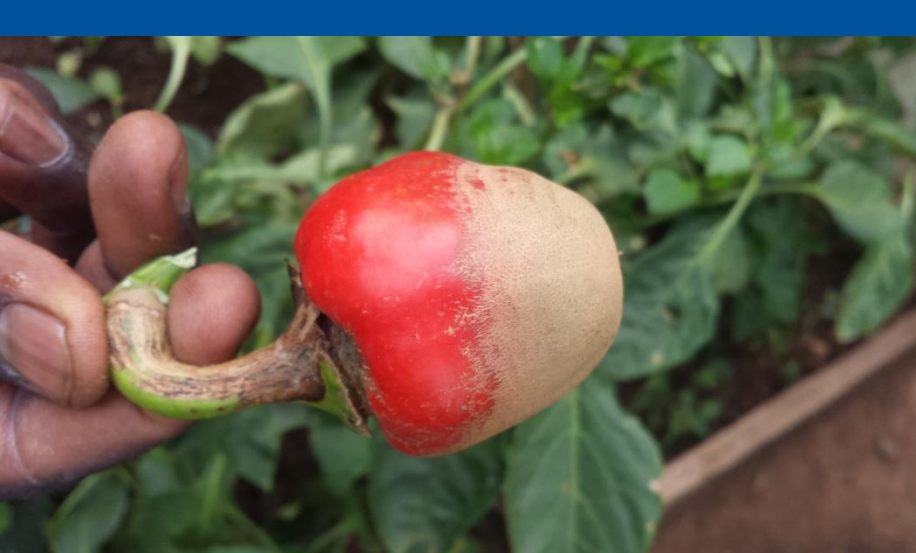
Seed beds, spacing & weeds



Poly bags filling, weeds in rootstocks, no labeling in grafted rootstocks



Stunted growth of papaya seedlings in the nursery and field- Suspected damping-off or viral disease (top) bell pepper fruit rot & sun scold



Seed beds, weeding and media filling in poly bags



Grafting Macadamia in the Nursery



Macadamia Orchard Management and Pruning



Lectures in High Schools- Bungoma County

- Banana Production
- Botanical Pesticides



Thank you-Asante Sanaa

