

# Agroforestry Improves School Gardens in Kamuli District, Uganda

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## Introduction

School gardens help provide a lunch for school children at Namasagali Primary School, In Kamuli District, Uganda (Photo 1). Some challenges faced by the school gardens and the school feeding program at Namasagali Primary School include: trampling of the gardens by livestock, encroachment of neighbors, and low supply of fuel for preparing the school lunch. Trees and shrubs planted in school gardens may address these issues by: creating fencing to protect gardens from livestock, fix nitrogen and improve soil fertility, and provide food, fuel and income for school feeding programs. After reading previous year's recommendations, surveying the gardens, and discussing as a team (Photo 2), our main objectives were:

- Fill gaps in the live fences.
- Expand the fuelwood lot and gap fill Acacia seedlings that have died.
- Identify the common trees surrounding the school.
- Increase Papaya orchard.



Photo 1: Kamuli District, Uganda



Photo 2: Agroforestry Team

## Methods

### Gap filling Euphorbia living fence (Photo 3):

- Cut 1-2ft long cuttings of Euphorbia.
- Clear brush and dig .5-1ft deep trench.
- Plant the Euphorbia cuttings every .5ft.
- Compact the soil around the cuttings.
- If dry, water the cuttings.



Photo 3: Gap in kei apple living fence.



Photo 4: Recently planted Acacia seedlings.

### Planting Acacia (Photo 4):

- Use hoe to dig a 2ft wide by 1.5ft deep hole.
- Incorporate organic fertilizer.
- Plant Acacia seedling, water shortly after.
- Mulch around the seedling to help retain moisture.

### Potting Papaya seedlings:

- Mix four parts soil and one part lake sand to improve drainage and aeration.
- Fill potting bags with the mix. Make a small hole and place seed inside.
- Water all the bags well.

## Outcomes

- Approximately 500 Euphorbia cuttings were planted to fill gaps in the living fences. Kei apple branches, which have many thorns, were used in place of barbed wire in the gaps. The cuttings and branches (Photo 6) will help keep livestock and people out of the gardens.
- 50 Acacia seedlings were planted in the fuelwood lot. Brush was cleared to expand the lot (Photo 5). Seedlings will help provide additional fuel to prepare meals.
- 120 Papaya seedlings were potted to support orchards at schools in the Kamuli District.



Photo 5: Clearing brush from fuelwood lot.



Photo 6: Cutting kei apple for gap filling.

## Challenges

- Drought conditions caused decreased yield and required more irrigation.
- Very compact soil that lacks nutrients.
- Euphorbia sap is toxic to eyes so caution is needed when working with cuttings.

## Future Recommendations

- Repair barbed wire fence around fuelwood lot and plant living fence.
- Continue to clear brush/shrubs from fuelwood lot.
- Gap fill and prune existing living fence.
- Create singe for trees on school grounds to assist with identification.

**Acknowledgements:** College of Agriculture and Life Sciences, Center for Sustainable Rural Livelihoods and Iowa State University – Uganda Program and donors, including: Jerry and Karen Kolschowsky and the Kolschowsky Family and Foundation; Rose Boughton; and Tom and Terri Miller