

Developing a School Garden Map and Crop Rotation Plan for Nakanyonyi Primary School in Kamuli, Uganda

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Purpose

Record and manage information about the school garden program at Nakanyonyi Primary School to increase vegetable production and ultimately the number of nutrient dense school lunches provided to the pupils. Through the planning and implementation of a crop rotation plan, crop yields and soil quality can be improved.



Figure 1: Pupils lined up to receive school lunch

Background Information

The school gardens at Nakanyonyi Primary School support the school lunch program (Fig. 1) for pupils unable to attain necessary nutrition from their diets at home. Nakanyonyi's eleven acre garden is currently supporting two lunches a week due to large pupil attendance. Previously, Nakanyonyi relied on the headmaster to recall garden boundaries as well as crop history due to lack of written records.

Objectives

¹Provide an accurate map of the gardens' perimeters
²Assess current land use and develop a crop rotation plan
 These objectives are contributing to the efforts to provide more school lunches during the week to pupils.



Figure 2: 2017 School Garden Bi-national Team

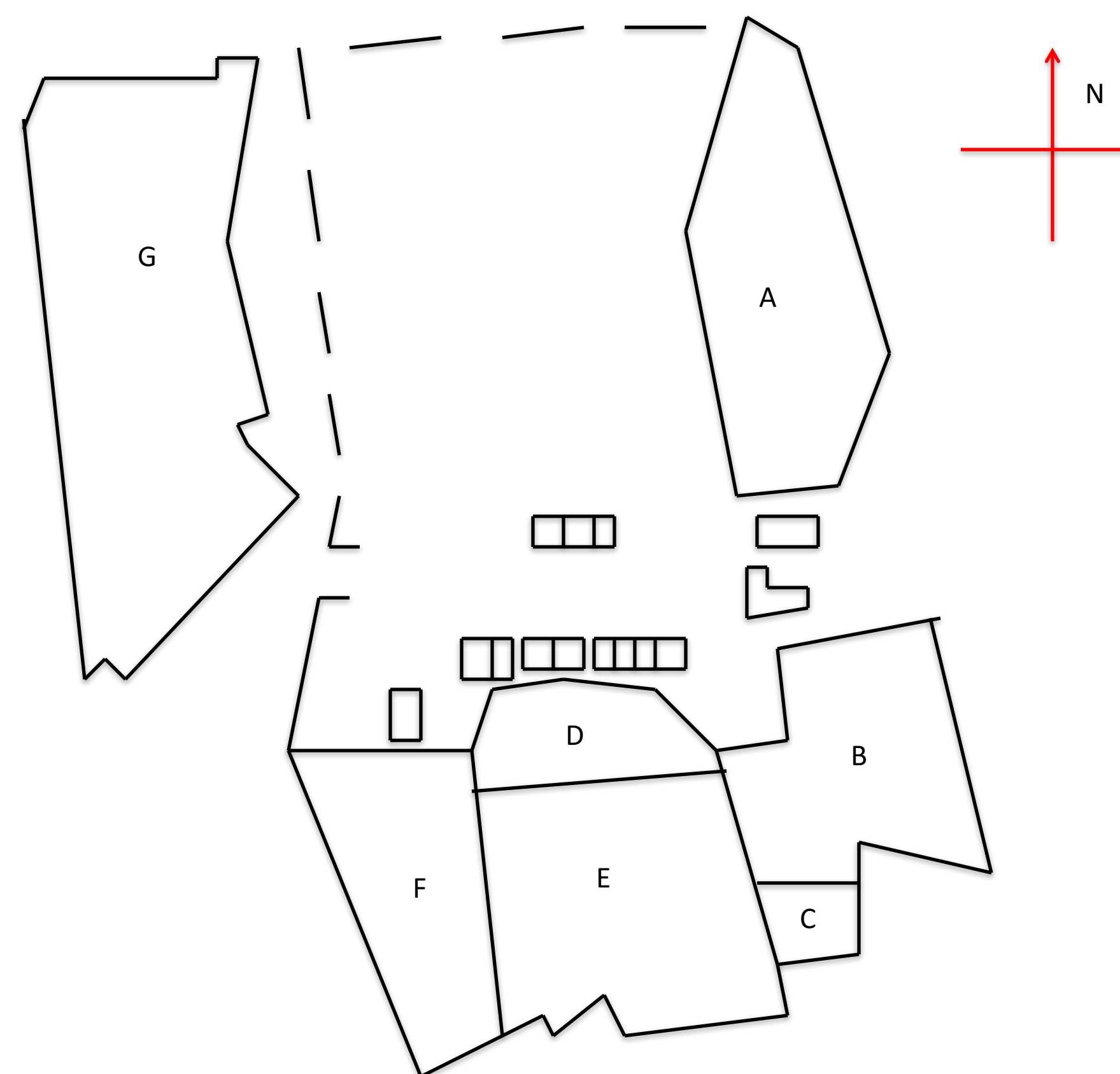


Figure 3: Bi-national team drawing scaled map

Table 1: Nakanyonyi Primary School Crop Rotation

Plot	2016	Current (July 2017)	Season 2 '17	Season 1 '18
A	Grain Amaranth	Cowpeas	Sweet Potatoes	Soybeans
B	Bananas intercropped with Collards, French Peas	Pumpkins	Pumpkins	Sweet Potatoes
C	Unknown	Collards	Tomatoes	Grain Amaranth
D	Bananas intercropped with Collards, Onions, French Peas	Cowpeas and Grain Amaranth	Grain Amaranth	Sweet Pepper
E	Grain Amaranth, Cowpeas	Grain Amaranth	Collards and Pumpkins	Grain Amaranth
F	Unknown	Papaya	Papaya intercropped with Cowpeas	Papaya intercropped with Collards, Soybeans
G	Pumpkins and Orange Flesh Sweet Potatoes	Soybeans, Cowpeas, Grain Amaranth, Sweet Potatoes	Eggplant, Cowpeas, Grain Amaranth, Sweet Potatoes	Collards, Grain Amaranth, Tomatoes

Figure 4: Map of Garden at Nakanyonyi Primary School



Fields marked by letters indicate cultivated land
 Estimated cultivated land 11.2 acres
 Unlabeled boxes are school buildings

Methodology

- ¹Provide an accurate map of the perimeter
- Measured school garden perimeter with tape measure and compass
 - Individual plots were measured by pacing
- ²Assess current land use to develop a crop rotation
- Headmaster was interviewed about crop history
 - Fields were surveyed for pests and diseases

Results

- Crop history and future rotation plan set in place (Table 1)
- Map constructed to illustrate 11.2 cultivated acres (Fig. 3 and 4)

Recommendations

- Use GPS to update maps that were constructed for accuracy
- Review record keeping systems to help track crop yields
- Analyze the school garden program as a whole to best improve crop rotation plan to improve soil quality and yields



Figure 5: Pupils at Nakanyonyi Primary School

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