

QUESTIONS REGARDING PLANTING FOR FOOD AND LANDSCAPE

Answers by Pearly Wong

August 13, 2014

Do people in Besongabang grow much of their own food now? If so, what do they grow?

They grow almost all their fruits and vegetables, but they have to buy meat, rice and other processed products.

Do people grow food (or other grown products) in gardens next to their house? Yes, they do, the sizes vary from 10x20 meters to rarely more than 1 acre

How much do they grow at home? They are unable to give measurements in kg or units, due to the diversity of crops (with the small amount of each) that they are growing. Depending on the land size. They will grow as much as their land allows. The 7 home gardens I have visited, are with sizes of 5mx20m, 10mx20m, 30mx15m, 30mx15m, ½ acre (2420m²), ½ acre, and 1 acre (4840m²). There are people happy with a 20mx20m plot while others are happy with a 1 acre plot. The size wanted is most probably related to number of household members.

How much do they grow in plots away from their home? Again depending on land size. Usually in plots away from home, they have two kinds of plots, one for cash crop production such as cocoa, bush mango, palm; and one for growing food crop such as cassava, yam, maize, etc. The different families visited hold farm sizes such as less than 1 acre, 2 acres, 3 acres, 5 acres and 1 hectare. Some have no ideas of their farm sizes. Generally one can say they produce more food crops in the plots away from their home than their home garden due to larger land sizes.

Here is some of the work and research I would like you to do:

Exploring edible and productive plants. (See additional reports with plant names, pictures, tables of size and growing season)

Fruit trees. What kinds of fruit trees are native to the area? Widely used? Make a complete list, get pictures and other information such as bearing season. Some that I can think of are citrus (orange, lemon, grapefruit), banana, mango, papaya, bread fruit?, please refer to tab 'fruit trees' in the plant table I attach. Pictures shall follow later.

Fruiting vines. Do they have grapes, berries or other vines with edible fruits? Instead of fruits, they eat vines as vegetables. The most commonly identified vegetable vines are onkoberry (fluted pumpkin), pumpkin, yam and melon (egusi). Please refer to tab 'vine' in plant table. I cannot identify any fruiting vines.

Vegetables, root crops, other low growing crops. Main vegetables include bitter leaf, water leaf, greens, garden eggs, okra, fluted pumpkin, spinach, pepper, egusi, maize. Root crops

include yam, cocoyam, cassava, potato, pineapple. Low growing plants include carpet buldgeweed (*Ajuga reptans*), *Aloe vera*

Try to devise a list of plants that produce continually through the year, i.e. when one plant stops producing (is “out of season”) another starts producing so that you have food from the garden all the time. Citrus, such as oranges, which is the most popular fruit tree in Besongabang is producing almost year long, except from February to April, with peak season starting in September. Apples are produced from January to April. Mangoes are produced from March to May. Sweet bush mango has its peak season from May to July. Plum’s peak season is in July-August. Some fruits are produced year round such as pineapples, bananas, and papayas.

Shade trees. What are good trees for this purpose? See comments below. Pictures. How fast do they grow? Excellent shades include bush mango, mango, plum, cocoa, kola, bitter kola and timber trees like Black Afara. Please refer to tab ‘shade’ in plant table

What kinds of plants do people like to grow at home (versus growing in distant fields)? What are home gardening practices? How do people manage their gardens? What kind of space do people want next to their home for this purpose?

Homegarden here is a form of agroforestry, with a mixture of vegetables, fruit trees, root crops and sometimes timber. So a typical homegarden can include trees such as plantain, banana, orange, mango, bush mango, plum; vegetables such as greens, pepper, spinach, ginger, bitter leaf, water leaf, okra, garden egg, pumpkin, fluted pumpkin, melon (egusi) and root crops such as cocoyam, yam, etc. and timber such as Black Afara. For farms away from houses, there are two kinds. One of them is for food crop plantation, which is basically similar with homegarden, but with bigger land sizes. The other **kind** is for cash crop plantation, where they grow cash crops such as oil palm, mangoes, etc. In the homegarden, the plants often seem to be grown on random location rather than planned arrangement. Vegetables of the same kind, for instance, are not necessarily planted in close proximity. They usually spend a few hours a day working on the homegarden, mainly weeding and planting the new plants. The common problems faced are animals such as birds, chickens and goats which destroy their vegetables. They have their homegarden typically behind their house, and sizes depending on the land sizes owned by them. Some also grow on the side of their house. Some people are happy with 20mx20m plot, others are happy with a one-acre plot. People with only small plots of land tend to focus on planting only vegetables. Then you will have a relatively neat garden of vegetables, with a few trees around.



Figure 1: Agroforestry homegarden



Figure 2: relatively neat vegetable garden

Hedge plants. We want to use plants to create spaces, for privacy screens, for separations. Popular hedge plants are Queen of the nights, yellow bush, Izora, hibiscus. There are a range of decorative plants I discovered in the village, some of which the names are unknown to locals. Please refer to 'hedge/living fence' tab in the plant table.

Living fences. What plants can be used for this purpose? We saw one at Amigo's house (See pictures below). Note: Amigo used this plant for the posts for the pulley on his well, an interesting use. We might want to use them as posts for our entry gate or for shade structures in the garden. Popular living fence include bitter leaves, coloured hibiscus, and moringo (new in the area but heavily promoted by Peace Corp for its nutrition and multi purposes). Coconut trees, queen of the night, palm trees are also seen to be used for that purposes. Please refer to 'hedge/living fence' tab in the plant table.

Fuel production. Some plants can be grown and harvested for fuel. For example, the shoots from the living fence can be clipped off and used for fuel. An important analysis for our work would be to figure out how much area is required to grow the fuel wood for one family. Could it all be grown on the land for their house? Or is more land required? Do we have a sustainable model for fuel wood production? i.e. Is enough wood being grown each year to replace the wood burned for fuel? Is the amount of land used reasonable? If it could all be on the home land plot or a designated fuel lot, that would be excellent. Note: this analysis requires figuring out how much fuel wood a family uses for the year and how much wood a particular plant produces during the year. **I have attached a document about firewood in previous email. See "Conditions in Besongabang">"Firewood"**

Ground cover. I discovered a couple of grasses that make a very nice surface to walk or sit on. They grow in the local climate. They are low growing so don't require mowing. One of them is quite tight textured so it doesn't leave a lot of space for animals to live in. **I only manage to find the ordinary grass, carpet grass and another type of longer carpet grass (which has been described by you in front of a pink house), widelia, and carpet buldgeweed (which cannot be stepped on). Please refer to 'groundcover' in plant table. In my opinion, groundcover is extremely important as during the rainy season, the water logging makes many front yards muddy, difficult to walk and ugly. Perhaps we can elevate some soil as walking pathway and cover the rest with groundcover.**

Create a plant nursery to grow plants for our project. **I will try to discuss the logistics with Mr. Orock when I meet him this weekend. Have you mentioned anything about this with him?**

One of the drawbacks to landscape plants is that they require some time to grow. A landscape may take a year or two for shrubs to develop and more years for trees to gain size. This is a big problem for our demonstration house because when we finish the house the garden will just be starting. As much as possible I want us to grow plants so that we can have relatively large ones ready as soon as construction is finished. In the case of grass, we can grow the grass now and then dig up sheets of it (sod) and place it when the construction is complete so we have a fully developed grass cover as soon as the construction is completed. **Will we need much land for this? I imagine it should be located near the model house? So I should request a plot for grass growing near the center?**