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## Experience with the Chaya Plant in Kenya

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As an agricultural missionary in Kenya, I knew that many people in the arid north would eat more greens if they could just get them to grow. Greens such as cabbage, collards and spinach are not drought-resistant and are attacked by insects when grown in dry areas. I requested chaya cuttings from ECHO because I thought it would stand a better chance of growing in these drier areas, providing year-round greens for the people.

Chaya almost never produces seed, so it must be propagated by cuttings. Fortunately, the cuttings can survive a long time in the mail. It was six weeks' time from shipping to when the cuttings arrived in Kenya. Despite their long journey, they still looked in good shape, and I planted them in pots. Later they were transplanted in three locations in northern Kenya: Kokwo Toto, Kurungu and Kalacha.

The cutting at Kokwo Toto was later dug up and replanted, and then totally defoliated by goats browsing on the leaves. It recovered a second time and is now growing nicely, but is periodically defoliated by the local people who take the leaves to eat. The Kalacha cutting was planted in the far north of Kenya, at an oasis in the salty Chalbi desert. It remained stunted despite regular watering. It was later moved to a place that received more water and is doing really well.

The cuttings at Kurungu have fared the best. The original cuttings are now two big shrubs, about eight feet high. Missionaries and others passing through have taken many cuttings, and the local people recently took more cuttings and planted them in their gardens. About half of the cuttings have taken off. Roughly two-thirds of the people like to eat the chaya. None is being sold yet in the local market. Collards ('Sukuma wiki'; *Brassica oleracea*) in the same garden are being totally devastated by bugs, but the bugs do not bother the chaya.

Chaya is sometimes dubbed "the spinach tree." It is a fast growing drought and disease-resistant shrub that provides large quantities of edible, very nutritious leaves. It originated in Mexico, but has made its way around the world as people planted chaya cuttings. Because of the presence of hydrocyanic glycosides in the leaves, it is recommended to cook the leaves thoroughly before eating them by boiling or frying for at least five minutes. [Ed: Dr. Frank Martin tells us that the cyanide is quickly destroyed by cooking. The word "cyanide" may needlessly scare people. Most people, including scientists, that I have talked to in areas where chaya

is used seem unaware that leaves even contain cyanate producing substances.] The shrub has long been a popular food among native peoples in Central America and southern Mexico.

Chaya outperforms most other green leafy vegetables nutritionally. The leaves are very high in protein, calcium, iron, carotene and A, B and C vitamins. The complimentary amino acids in chaya are well balanced, which is important for those who have a diet low in protein and for children and pregnant or nursing mothers.

[MLP: Because its site of origin has seasons both of long droughts and of hot, humid rainy weather, it has outstanding resistance to pests and diseases under both sets of conditions. In Florida, ECHO has grown chaya for 21 years and never had a problem with disease or insects. However, during the cool, subtropical winter it essentially goes dormant. Any pests at this stage are just ignored.]

### **Preparation**

The local Samburu people in Kurungu use chaya a lot. SuZann Beverly, a missionary in Kurungu, writes, "they cut up the leaves, add water, bring it to a boil, pour out the water, add fat, fry slightly and add it to their ugali [corn meal] mix. The Samburu people have no onions and spices to speak of, so they don't use it separately like other people would."



Figure 1: Ruth Andersen in front of the chaya plant at Kurungu

At Kokwo Toto the Pokot people cook chaya like sukuma wiki (collards), fried with onion in a little bit of oil.