C3P FOOD SECURITY BRIEF NO. 1

FOOD SECURITY IN THE MAJOR CASSAVA GROWING REGIONS OF UGANDA

By Steffen Abele[1], Edgar Twine[2] and Christopher Legg[3]

BACKGROUND

One of C3P's activities is to assess and document the status of food security in the regions' households, and the relationship between food security and the C3P mandate crops, East African Highland banana and cassava.

This brief describes three indicators of food security in Uganda. 'Food security I' contains the actual calorie intake per caput per day from own production. 'Food security II' depicts the total cal/cap/day capacity of households from own production (both consumed and sold), whereas 'Food security III' describes the capacity of households to purchase food from off-farm income.

FOOD SECURITY AND FOOD SOURCES IN UGANDA

In 2003, Ugandans had an average daily calorie intake per person of 2,360 kcal. Of this amount, 94 % comes from vegetal products, whereas only 6 percent comes from animal products (FAO 2006). Hence, crop production and the calories obtained from crops give a good indicator of food security (Table 1), as the survey covers 96 percent of the caloric intake from vegetal crops, as well as 90 percent of the overall caloric intake.

Table 1: Food consumption for overall Uganda and the respective districts

	Overall Uganda	Average 12 districts
Calories from vegetal products	2,228	2,003
Of from alcoholic beverages	146	n.a.
Calories from vegetal products excl. alc.	2,082	2,003
Calories from animal products	132	n.a.
Daily calorie intake	2,360	n.a.
Percentage calories from vegetals excl. alc. covered in survey	n.a.	96
Percentage calories from total excl. alc. covered in survey	n.a.	90

Source: FAO 2006, own data

THE REGION

The region covered in this brief contains the 12 Ugandan main cassava growing districts (Map 1).

Map 1: Districts covered in this brief

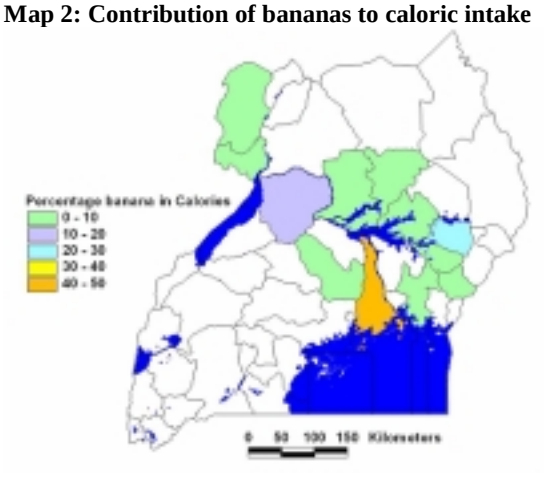
Source: GIS.

THE ROLE OF BANANA AND CASSAVA IN THE REGION'S FOOD SECURITY

Bananas play a minor role in the household's diet in most of the districts, except for Mukono, where cooking banana accounts for half of the daily calorie intake from own production. Further away, bananas cover only between one and twenty percent of the caloric intake (Map 2). For overall Uganda, bananas provide 20 % of the daily caloric intake (FAO 2004). The dependence on bananas and the low calorie intake in Mukono are probably related to the outbreak of Banana Xanthomonas Wilt in Uganda. This disease was first recorded in Mukono district and has up to now had a devastating effect on banana production.

[1] Economist, IITA-Uganda, [2]Economist, IITA-Uganda; [3]GIS-Specialist, IITA-Nigeria.

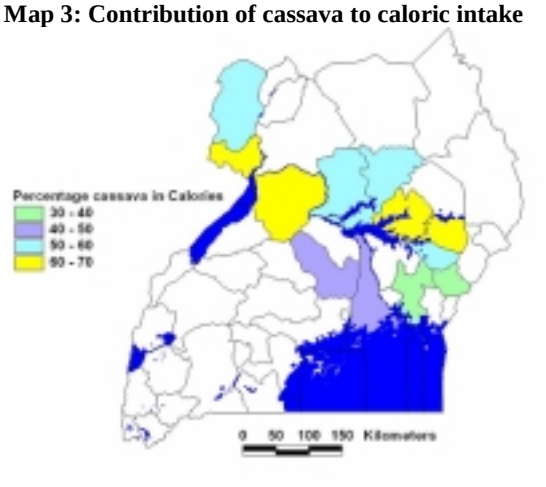
Map 2: Contribution of bananas to caloric intake



Source: Own data

Cassava plays a major role for the household's caloric intake in the region. For the whole of Uganda, cassava provides around 13 percent to the daily caloric intake. In the twelve districts assessed here, it provides from 25 to almost 70 percent of the total calorie intake (Map 3). This indicates the importance of cassava for this particular region. In the mid nineties, the region was struck by the Cassava Mosaic disease. Since then, NARO and its regional partners, IITA and EARRNET, have made serious efforts to counter the disease by introducing CMD-resistant varieties to these districts. Adoption of resistant varieties by up to 90 percent of farmers has successfully controlled the disease.

Map 3: Contribution of cassava to caloric intake

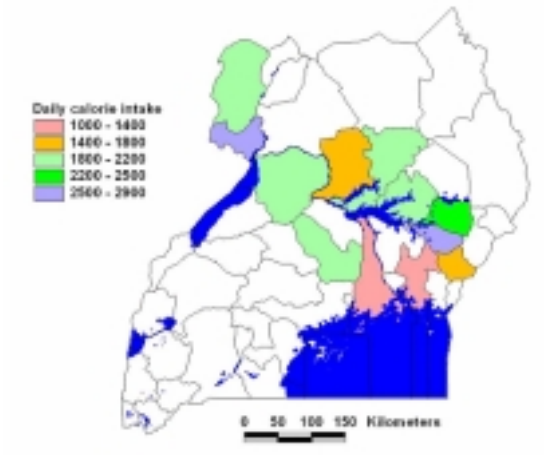


Source: Own data

Food security I: Daily calorie intake from subsistence production

This indicator comprises the actual intake from own production, not including the calories from crops that were sold on the market. Across the region, the intake ranges from 1,000 kcal/caput/day (in Mukono district) to 2,900 kcal/caput/day in Nebbi district. The average is around 2000 kcal, which complies with the Ugandan average calorie intake from vegetal crops of around 2270 kcal/caput/per day.

Map 4: Daily calorie intake from own production



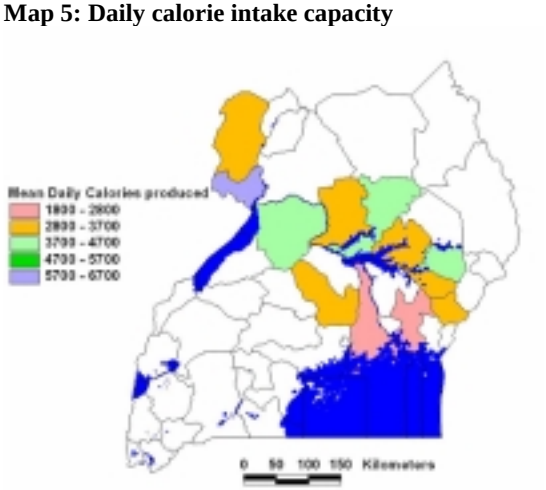
Source: Own data.

FOOD SECURITY II: DAILY CALORIE CAPACITY FROM TOTAL CROP PRODUCTION

The daily calorie potential comprises the overall production of edible vegetal crops in terms of kcal. This figure includes the calories produced and self-consumed, as well as the calories that could be potentially obtained from crops that are presently grown but sold on the market. This is particularly relevant for times of shortages in production, as households then tend to cut down on marketed sales in favour of own consumption of the produce.

This calorie production ranges from about 1,800 (Mukono) to 6,700 kcal per capita per day (Map 5).

Map 5: Daily calorie intake capacity

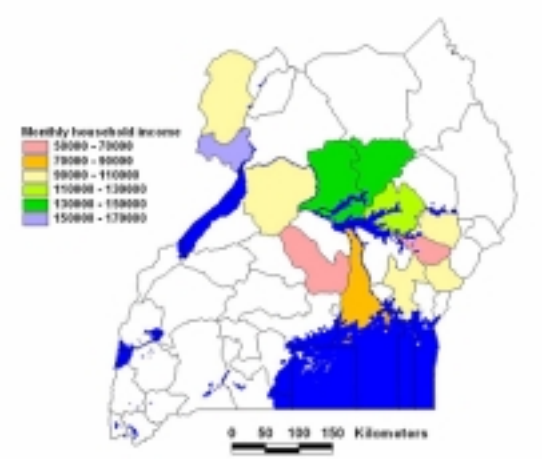


Source: Own data

Food security III: Off-farm income

Off-farm income provides an additional access to food through purchases from markets. The monthly off-farm income ranges from 54,000 Ugandan Shillings per household (an equivalent of about 29 US $) in Luwero district to about 170,000 Ugandan Shillings (92 US $) in Nebbi district. The distribution is depicted in Map 6.

Map 6: Monthly off-farm income per household

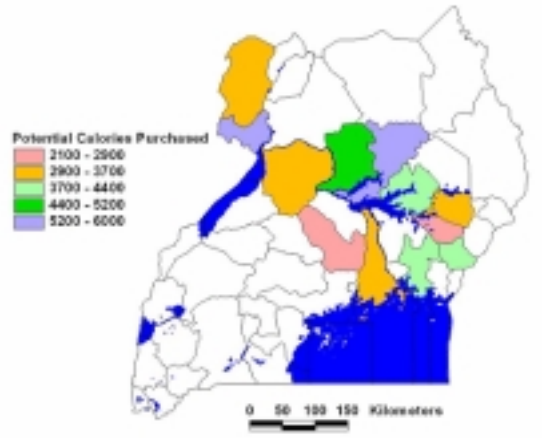


Source: Own data.

How does this translate into food security? For example, households that earn 100,000 Ugandan Shillings per month could purchase 200 kg maize (at an assumed price of 500 Shillings/kg). This would translate into 662,000 kcal per month, 2,200 kcal per day or, at a household size of eight people, supply about 2,800 kcal per caput per day for this household. This means that the capacity of the household in terms of calorie intake would be more than doubled in most of the cases. However, the money is usually only allocated to food in times of crises, as it is needed for other expenditures than food in normal situations.

Map 7 shows that households in all the districts have sufficient money to cater for their food needs, they would even be able to counter threats from production losses. The off-farm income capacity ranges from 2100 kcal/cap/day to almost 6,000 kcal/cap/day.

Map 7: Calorie intake capacity from off-farm income.



Source: Own data, FOODNET/MIS

CONCLUSIONS

Households in the 12 main cassava growing districts in Uganda are food secure. They have in general, with a few exceptions, enough food from own production to sustain their food needs. In any case, they have enough capacity to cater for their food needs either through own production or through purchases from off-farm income.

However, it is also clear that cassava constitutes a major share of household's diets in many districts, so that a severe loss of cassava could still negatively affect household's diets, and in particular their wealth.

It is therefore important to maintain the cassava productivity, in order to make sure that these households can maintain their diets and their livelihoods.

Editorial

The C3P food security briefs are published by IITA and CRS within the Crop Crises Control Projects.

How to cite:

Abele, S., Twine, E. and C. Legg (2006): Food security in the major cassava growing regions of Uganda. C3P Food Security Briefs No.1. Ibadan, Nigeria (IITA). http://c3project.iita.org/

Acknowledgements:

We are most grateful for the following contributions and assistance in this work:

The work on which this brief-issue is based has been funded by USAID, as well as IITA core funds. Data collection and analysis was done in collaboration with NARO, Uganda.