



5 Consumption

Women preparing food in the yard (Tamale, Ghana).

Pay Drechsel

Moving across different agro-ecological zones in West Africa, by starting in Accra at the Atlantic Ocean, towards Kumasi, Tamale and finally Ouagadougou (Figure 5.1), traditional diets are changing with culture and food that can be produced. These differences remain important despite global and regional trade, multi-cultural diets and a trend toward urban fast food.

In the example of the mentioned four cities,^{5.1} the overall food consumption in kilogram peaks in Kumasi (Figure 5.2), which lies in the heart of the tuber belt and is famous for its (heavy) tuber- and plantain-based *fufu* dishes. In Ouagadougou, on the other hand, cereals like sorghum and millet as well as livestock meat play a major role in household food consumption, while the share of fruits and vegetables increases towards the south, with Accra also having the easiest access to fish and a significantly

higher fish consumption than any other city. Vegetable consumption is particularly high in Kumasi, where tomatoes and garden eggs are common. Accra has the highest household consumption of fruits, especially oranges. In comparison, fruits and vegetables are less prominent in Tamale and Ouagadougou, which might also be linked to the increasingly drier climate (Figure 5.2).^{5.2} The variations in amounts and types of food influence the calorie and

Urban diets are undergoing change, but traditional meals still play an important role.

protein intake across the urban populations. Overall, the protein supply appears sufficient

in all cities and relatively high in Accra and Ouagadougou, based on the higher shares of fish and meat in the respective local consumptions. While cassava, yam and plantain have much lower protein levels than for example sorghum and millet, beans are a common protein source in Kumasi (e.g., *red-red* dish, which refers to red plantain and red beans) and Tamale (e.g., *Waakye*, which refers

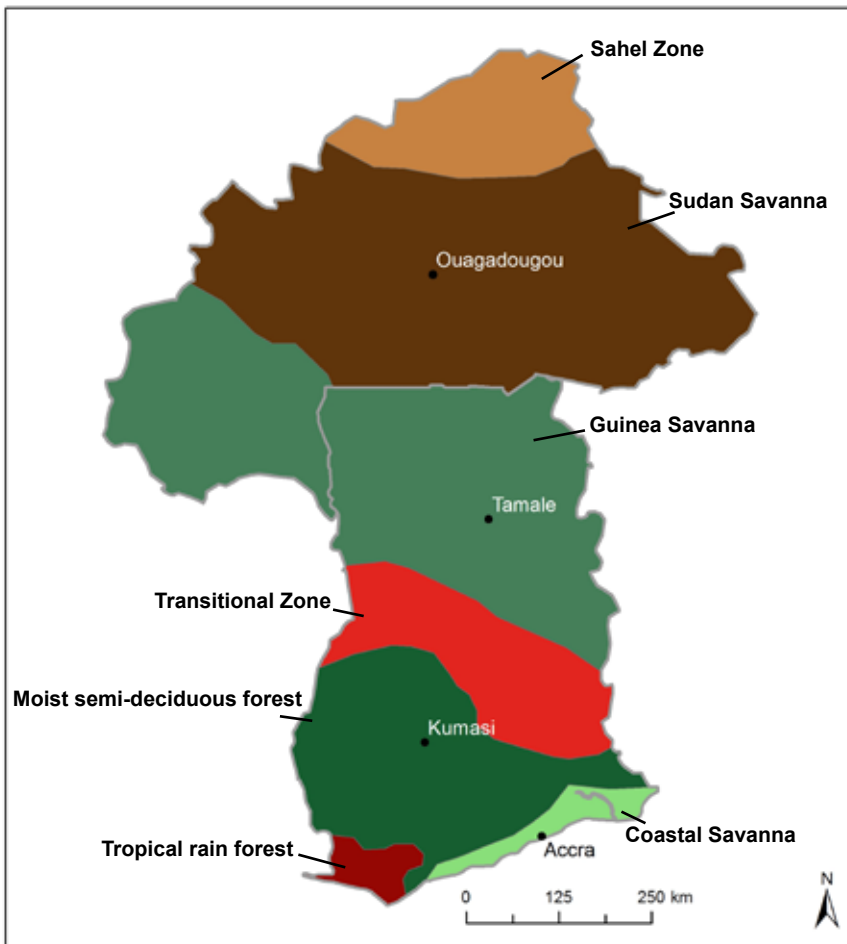


Figure 5.1. Agro-ecological zones in Ghana and Burkina Faso.^{5.1}



Cereals and legumes sold in Tamale, Ghana.

Waakye: a popular dish in Ghana based on rice and beans.



Fresh vegetables offered at markets in Ouagadougou, Burkina Faso.

Check-check: modern urban fast food consisting of rice, chicken, and raw salad (lettuce or cabbage).

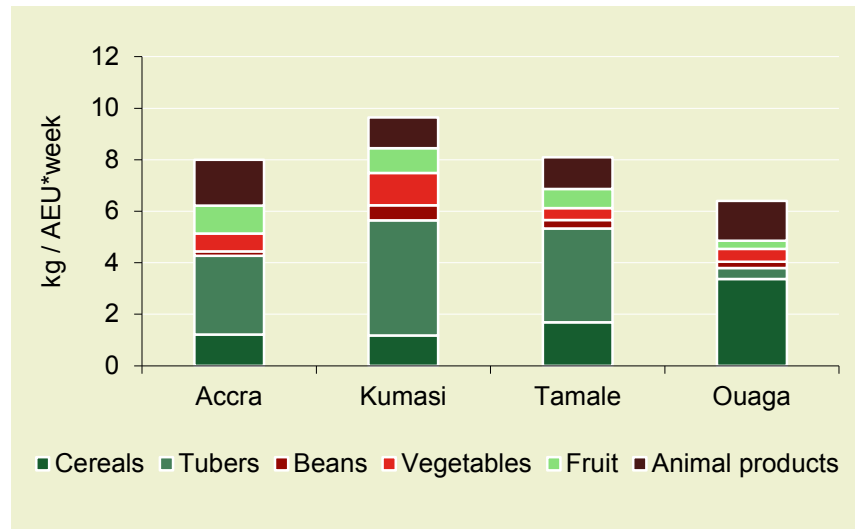


Figure 5.2. Combined household and street food consumption of major food groups in kg per adult-equivalent unit (AEU) per week (fresh weight).

to beans and rice). The average urban household in all four cities keeps four to six chickens, which contribute to a regular supply of eggs; in Kumasi the number is twice as high, and the surplus is sold.

The amount of calories consumed per day can, however, be below what active adults require, which is between 2000 and 3000 Kcal. The calorie intake appears lowest in parts of Accra's population where food prices and living costs peak, which motivates many households to buy yam and plantain when returning from the northern countryside. The contribution of subsistence home production (urban agriculture) to urban consumption varies strongly with the size of available land, but also ethnic preferences for example in view of the types of local vegetables produced, and the distance from the city.^{5.3, 5.4} Compared with national consumption data in Ghana,

the main difference reflected in the urban diets is a shift in the cities to more rice and meat-based meals and fewer tuber- and plantain-based meals. The difference also reflects a shift to smaller family units and greater convenience in food preparation, as rice-based meals are faster to prepare than the traditional cassava/yam and plantain meals that require hours of pounding, usually by unemployed home-based family members. The urban diet also shows a growing contribution of food bought in street restaurants and canteens, which serve the working population as well as the poor (see page 65). In Accra, especially, poorer urban households can spend about 40% of their food budget on street food. This is especially the case where homes do not have sufficient water or space for cooking. The fast food served in streets, like the popular *check-check* (rice

In case of fresh vegetable purchases, households in Tamale showed about 40% lower expenditures than households for example in Accra or Takoradi, despite lower market prices. Well-educated and high-income households have higher fresh vegetable and fresh

fruit expenditures and daily consumption rates, a relationship also observed for other food and non-food items, implying that nutritional programs might be most successful if linked to initiatives supporting an increased household income.^{5.6, 5.7}



Fresh vegetables sold at a market in Ouagadougou.

Consumers' stated willingness to pay for food safety in Tamale

Christina Seeger and Wilhelm Löwenstein

Smallholder farmers cultivating in Tamale often rely on the use of wastewater for irrigation and lack knowledge regarding the safe use of agrochemicals in agricultural production. Thus, consumers are likely exposed to health risks, especially when eating raw vegetables like cabbage. Of the 318 consumers surveyed in Tamale, 65% were concerned with agrochemical and wastewater use in agriculture, and they were aware of the health risks associated with it. However, at the local markets,

safe vegetables and unsafe vegetables are supplied together and they are traded at the same market price. This makes it impossible for consumers to differentiate safe vegetables from contaminated ones prior purchase. One option to guarantee consumers that vegetables are safe is certification. We assessed how consumers in Tamale value food safety by asking them to state their willingness to pay a price premium for certified safe cabbage. Roughly 97% of the respondents are willing to pay a higher price for certified vegetables. The estimated price premium on the average market price for one averaged sized certified cabbage

was 120%. This shows that consumers are highly sensitive about the health risks of agrochemicals and wastewater in agricultural production and consumers' preference for product differentiation.



Market stall in the central market in Tamale.

For more information:

Seeger, C., Löwenstein, W. (forthcoming). Trust, certification, and consumers' willingness to pay for safe vegetables in Tamale, Ghana. IEE Working Paper. Bochum.

and chicken), supports in all cities the production of exotic vegetables, which form a side dish. As these leafy vegetables, like lettuce, are highly perishable, production takes place in close market proximity on otherwise unused urban open spaces where polluted water may be used for irrigation. The majority of all traded lettuce (60% in Accra and 83% in Kumasi) ends in the street food sector. The remaining share goes to restaurants, canteens and hotels. Private households in Ghana take only about two percent of the production, which reflects the 'exotic' character of raw salads in the national diet. The share of salad consumption is likely to be higher in parts of Ouagadougou's population, given its exposure to the French cuisine, than in the Ghanaian cities. When asked about possible health risks, consumers are concerned (see above) although in real life they hardly ask about the origin of their vegetables and care more about fresh appearance and neatness.^{5.5}

Irrigated lettuce field in Ouagadougou's city center.



Women dominate the post-harvest food sector in West Africa.

Shifts in dietary patterns, with more processed foods being consumed, are significantly influencing not only food production, but also the post-harvest sector. Demand for convenience is an overarching trend across income groups and is reflected in the strong demand for processed and prepared foods and in the expansion of street food. The combined effects of rapid urbanization, population growth and resulting transformations in food demands have had major impacts on the size of the West African food economy. Such effects have also contributed to the rapid development of non-agricultural postharvest activities, such as processing, packaging, distribution and retail. According to the OECD, across West Africa, 66% of total employment is in

the food economy, from the farm level to processing, packaging, transportation, distribution and retailing, providing jobs for 82 million people. About 35% of jobs in urban areas are in the food economy. About 60% of these urban jobs are in marketing and food away from home, in contrast to 15% in rural areas.^{5,8} These transformations open new opportunities for value addition and gender-specific employment creation, especially in the off-farm segments of the value chain (Figure 5.3). In urban areas, one out of three jobs for women (one out of seven for men) are in off-farm food activities. Food processing and food-away-from-home services are growing and lucrative activities. Given the size of the food economy, its functioning, competitiveness and development will have major impacts on employment structures and gender-specific job opportunities.^{5,8}

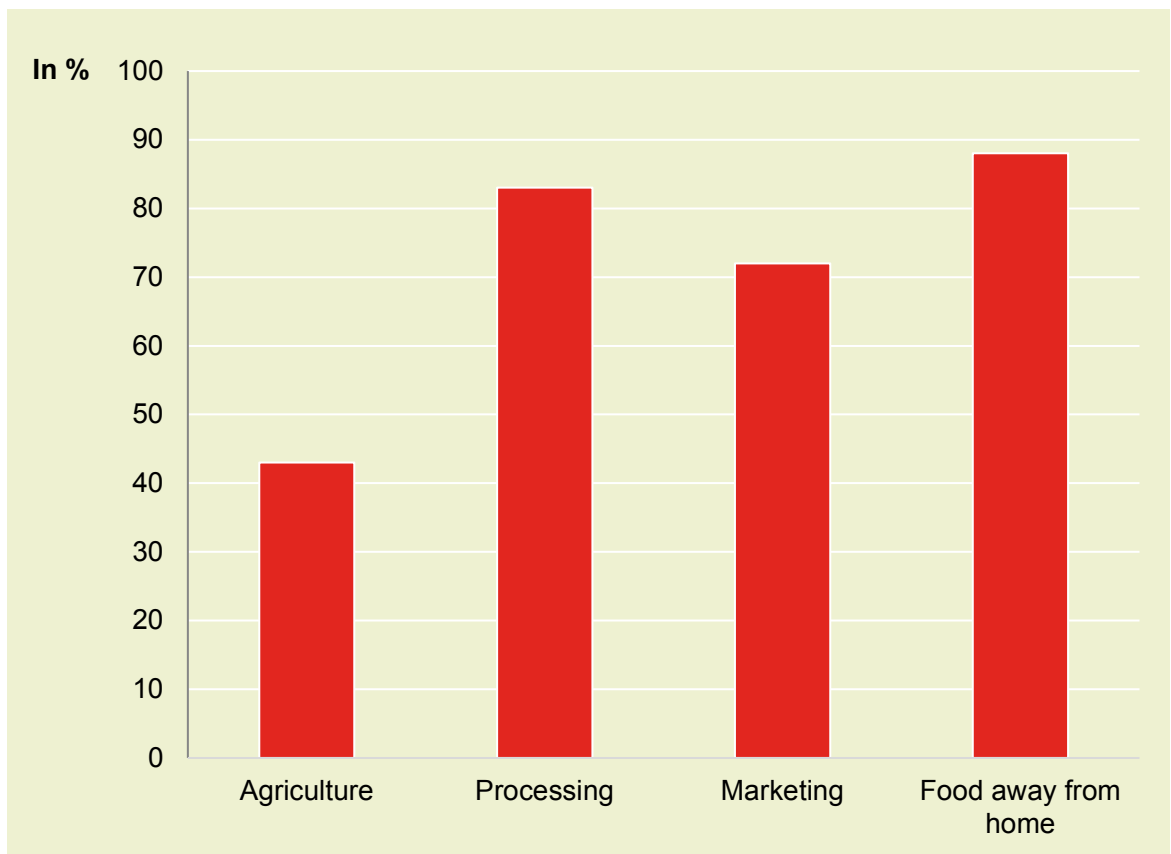


Figure 5.3. Share of women's employment by food system activity in West Africa.^{5,8}

Food consumption and malnutrition in Ouagadougou

Pay Drechsel

Despite a large variety of food consumed in Ouagadougou, many food items are seldom served, particularly foods from animal sources such as dairy products and eggs. Still, the variety of the city diet remains higher than that of people living in rural Burkina Faso. The typical daily diet in Ouagadougou consists largely of cereals, vegetables and fats from vegetable sources. Sweetened products, fried foods, dairy products, non-fatty meats, nuts, seeds, fruits and other vegetables are also frequently consumed during the week, while eggs are consumed less than once a week. Among the nutritious 'vegetables', the leaves of Amaranth are

consumed by over 90% of the urban dwellers interviewed, either boiled with or without cereal-based meals like couscous, or in groundnut sauce. However, despite the reasonable frequency of such vegetable intake, the quantities consumed remain low and cooking is causing a loss of nutrients, while on the other hand the consumption of 'snacks' is on the increase. A statistical analysis of the most prominent groups of food consumed revealed two dietary patterns: 'snacking' (frequent food consumption outside the main meals) and 'modern foods' (scrambled eggs, chicken, tomato sauce, pastas, cheese, meat, sodas, soup, French dressing, hamburger), which are both typically urban. Both patterns were positively and independently associated

with the economic status of households and with food expenditures. The 'snacking' behavior was strong among younger, unmarried people having a formal job, whereas the 'modern foods' pattern was less pronounced in districts with a high proportion of Muslims or particular ethnic groups, like Mossi.^{5,9} A typical urban challenge, not only in Ouagadougou, is the co-existence of obesity and undernutrition within the urban area. The two most recent demographic and health surveys showed an unchanged picture with about 30% of women living in Ouagadougou being overweight or obese, as compared to only about 6% of their rural counterparts. In the same city, however, between 17 to 18% of children below the age of five show wasting or stunting.^{5,9, 5.10, 5.11}



Streetfood sold in Accra, Ghana.