

Context and Challenge

Context

Poverty in Africa is both widespread and chronic, as indicated by the following statistics (IFAD, 2001):

- There are 302 million poor people in Sub-Saharan Africa (i.e. 48% of the population).
- Between 1987 and 1998, while the number of poor in all developing countries of the world decreased by 0.5% per year (in spite of a total population growth of about 1.5%), the number of poor people in Sub-Saharan Africa increased faster (by 3.3% per year) than the population as a whole (3.1% per year).
- In West and Central Africa (WCA), about 75% of the poor live in rural areas.
- The level of food production per person in WCA has not changed since 1980.

In villages, towns and cities across the continent, these statistics have another far more human and compelling face. Poverty directly affects the fundamentals of human life, as indicated by the fact that overall in Sub-Saharan Africa infant mortality is 92 per 1000 live births (88 for WCA) and life expectancy is only 47 years (48 for WCA).¹

This picture of widespread and chronic poverty accounts for the consensus around the UN's Millennium Development Goals (United Nations, 2002), and the desire to alleviate such poverty is at the center of initiatives such as the New Partnership for Africa's Development (NEPAD). Given the concentration of both human populations

and poverty in rural areas and the still largely agrarian nature of Africa's economies, it is logical that the agricultural sector should be a focus of attention. The links between agriculture on one hand and food security, nutrition and environmental management on the other are undeniable. At the same time, the agricultural sector will necessarily play a central role in stimulating and supporting sustained economic growth. In many countries in Sub-Saharan Africa, it is generally observed that when agriculture does well, the economy also does well.

While it has often been suggested that African farmers are highly conservative and fixed in their traditional ways, to the contrary, over the last three decades, there have been highly significant changes in patterns of both production and consumption of agricultural goods. One particularly striking example of this is shown by rice in WCA.

Rice has been cultivated in WCA for centuries, and in areas of Sierra Leone, Guinea and Côte d'Ivoire rice has long been a staple food. Since the mid-1970s, however, the consumption of rice in the region (and to a lesser extent in Sub-Saharan Africa as a whole) has increased dramatically (Figure 1). For example, over the period 1970–1998, total rice consumption grew by an average of 3.7% per year, resulting from a combination of population growth (accounting for 70% of this annual growth) and increasing per-capita consumption (accounting for 30%).

The increase in rice consumption is not a uniquely urban phenomenon, although it has been

¹ Compared with infant mortality of 5.4 per 1000 live births and life expectancy of 78.2 years for the OECD 'High Income' countries in 2001 (World Development Indicators Database, April 2003).

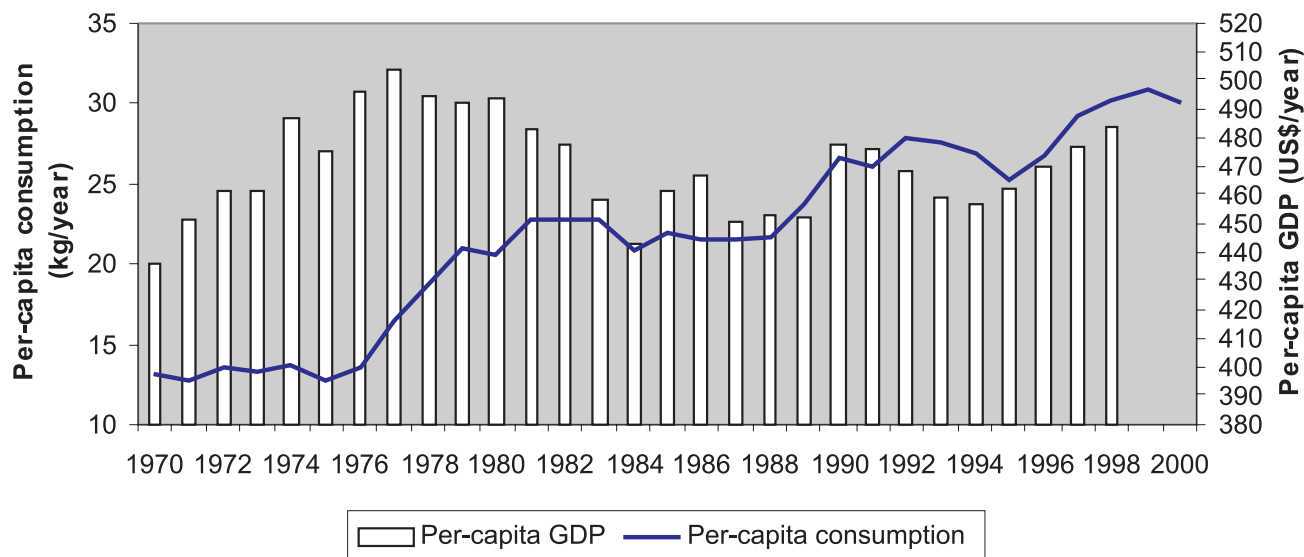


Figure 1. Per-capita rice consumption and GDP in West Africa
 Source: FAO-Agrostat 2001, World Bank African Development Indicators, 2001.

fuelled to a significant extent by increasing urbanization and associated changes in lifestyle. In fact, rice is consumed in urban and rural areas throughout the region, to the extent that it must now be considered as one of the region’s staple foods. The central position of rice in the region’s food regime is illustrated by the fact that following the 50% devaluation of the CFA franc in 1994, consumers in Burkina Faso, Côte d’Ivoire, Mali and Senegal failed to shift to locally produced cereals, but rather chose to maintain their pre-devaluation levels of (largely imported) rice consumption (Diagana et al., 1999).

While consumption has boomed, production has also increased but to a lesser extent (Figure 2), thus leaving a growing gap between consumption and

regional production. In WCA, this gap has been filled by the importation of rice from Asia and North America, with imports reaching 2.5 million tonnes of milled rice in 1998. This level of importation represents 20% of agricultural import value of the region and makes WCA an important player in what is a relatively ‘thin’ world market for rice (only 6% of world output is subject to trade; Dawe, 2002).

In effect, WCA has become increasingly dependent on Asian producers and the world market for one of its staple foods. It is true that since 1982, the inflation-adjusted price of rice on the world market has dropped precipitously and is now at an all-time low (Dawe, 2002). It is also the case that in an age of trade liberalization and

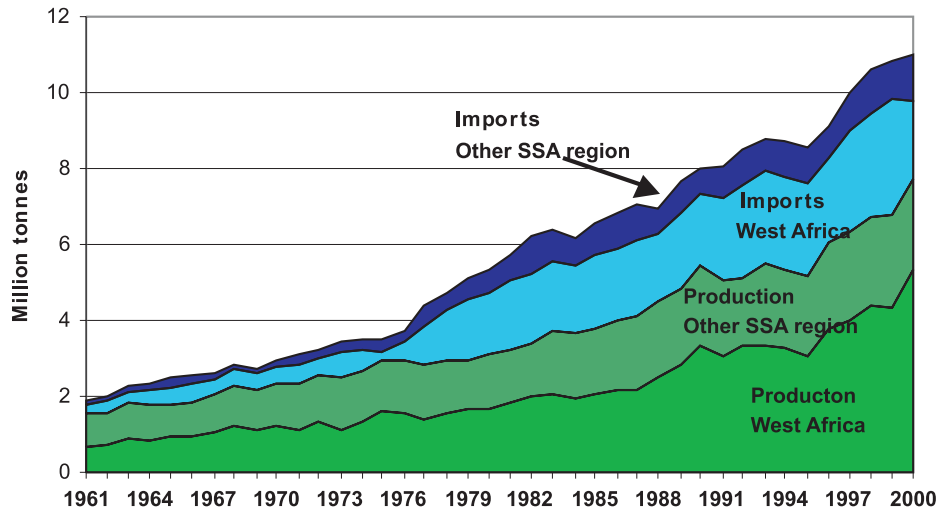


Figure 2. Rice production and imports in West and other Sub-Saharan Africa regions
Source: FAO-Agrostat 2001.

globalization, the objective of national food self-sufficiency can be seen as an anachronism. Nevertheless, the situation with rice in WCA should raise serious concerns. Specifically, the ongoing Asian agricultural transformation (induced by the diversification of consumption patterns and the continuous growth of total rice consumption) may affect the volume of exportable, surplus rice (as have policy shifts, and political and environmental events in the past). In addition, there is some evidence that the rate of yield increase of irrigated rice in tropical Asia has slackened or even ceased, and the gap between potential and actual farmers' yields has narrowed (Peng et al., 1999). Finally, the importation of rice is placing an increasingly heavy demand on available foreign exchange. Thus, the wisdom and sustainability of West and Central African rice policy that relies heavily on the world market seems doubtful.

The ever-increasing demand for rice, combined with the fact that rice is successfully and economically produced in a wide range of agro-ecologies in WCA, would appear to offer a ready-made opportunity for increased local production and processing. Specifically, given growing demand, the widespread distribution of production and its potential for increase, the relatively small scale on which it is undertaken, the high level of involvement of women, and the requirements for local processing, the 'rice production–consumption chain'² would appear to be a platform offering significant potential for rural-based economic growth and poverty alleviation.

² The 'rice production–consumption chain' is considered to encompass all actors and processes implicated in the production, processing, storage, marketing and consumption of rice.

Challenge

The challenge is to enhance the performance of the rice sector in order to enable producers, processors and marketers take advantage of the demand for rice. Three inhibiting factors can be identified:

- Low levels of productivity
- Poor quality of the marketed product
- Unfavorable market and policy environment.

Each of these factors represents a complex set of interlocking challenges, which will only be successfully met through the actions of producers, processors and consumers supported by research, technology development, outreach and policy change. Nevertheless, a number of considerations can be identified which, when taken together, outline the scope of the challenge facing those seeking to contribute to poverty alleviation through interventions in the rice production–consumption chain.

Perhaps the most important of these considerations is the high level of diversity that characterizes both the natural environment and agricultural production systems in the region. This diversity has critical implications for agricultural research, and indeed for all those seeking to contribute to rural development. Specifically, diversity means that there will likely be multiple trajectories of change, which places greatly increased burdens on research and related development services.

However, agricultural research capacity is tightly constrained. Most NARS in the region

struggle to effectively prioritize research areas, mobilize and manage research resources, and bolster public support for research. This is not to say that national and international agricultural research has not been effective to some degree (Maredia et al., 2000) or that returns to investment in agricultural research in Africa have not generally been positive (Masters et al., 1998), but there is a persistent sense that poor, small-scale producers have not been particularly well served by the formal research and extension systems.

One factor that has limited the impact of agricultural research in Sub-Saharan Africa is its traditional focus on production or supply questions at the expense of other steps and processes in the production–consumption chain. As consumers’ tastes become increasingly sophisticated, and locally produced products compete with imports, issues such as product quality may become as important as gains in farm-level productivity. These considerations are particularly cogent in the case of rice, because the quality—and thus the value—of the final product is determined to a large extent by post-harvest processing. Here again the question of diversity arises, as the parameters of quality vary significantly over Sub-Saharan Africa.

A more recently recognized constraint to agricultural progress is the HIV/AIDS pandemic, which cuts across all sectors, but is particularly felt in labor-intensive agriculture because of its direct effects on the primary work force of people aged 15–49 (*see* Box).

Finally, decisions taken along the production–consumption chain are conditioned to a greater or lesser degree by the policy environment. The fact that rice has been a ‘political’ crop in much of WCA, where for example, decisions concerning

HIV/AIDS

HIV/AIDS is a new subject for the CGIAR and WARDA. It occurs in all countries in West and Central Africa. At the end of 2000, UNAIDS estimated that 2.6 million Nigerians were affected by the disease, and 10.7% of Ivorian adults were 'living with' HIV/AIDS. The disease hits hardest people aged 15–49 (i.e. the most economically productive segment of the population). HIV/AIDS goes beyond a health issue. It directly or indirectly undermines key sectors of human development, including food security, environment, education, health, agriculture and economic development. WARDA will contribute to the assessment of the impact of the pandemic on food security through rice and rice-based systems in the region. WARDA will place emphasis on the development of labor-saving technologies and rice-based production systems providing additional nutritional value that could mitigate against the impact of HIV/AIDS on the welfare of the rural population.

prices, import licenses and development schemes have long been used for explicit political purposes, adds an extra, complex dimension to the policy

discussion. But, while policy research must certainly remain high on the agenda, this is another area in which regional capabilities are limited.