

Smallholder Agriculture in Ghana

In recent years, agricultural growth in Ghana has been positive overall. However, much of this growth has resulted from area expansion rather than increased yield. Furthermore, growth patterns have not been uniform across commodities or geographic regions. To increase agricultural performance, it is essential to target the small farmers who constitute the largest segment of producers. Policy objectives should aim to improve the delivery of services to smallholders and to develop new ways to include smallholders in more efficient value chains.

Agricultural Contributions to Growth

In the aggregate, agriculture has grown about 5.7 percent annually over the past 5 years. However, growth rates vary widely across subsectors. For example, recent production data reveal average annual growth rates of around 8.5 percent for cocoa, 2 percent for roots and tubers, and 5.6 percent for cereals and pulses. Area expansion has accounted for almost two-thirds of such growth, and productivity increases account for the remainder.

This subsectoral diversity is mirrored by geographically heterogeneous growth patterns. Within this overall trend of area-driven growth, the yield-led growth that did occur tended to be in the south and in areas with better access to markets and higher population densities. This finding suggests that such conditions may favor intensification strategies.

Agriculture in northern Ghana remains particularly vulnerable. For example, the average range of district-level maize yields in the north from 1992 to 2005 was 35 percent higher than in the forest and 55 percent higher than at the coast. Higher rates of rural poverty are likely exacerbated by factors linked to fewer opportunities for intensifying and commercializing agriculture, such as poorer access to input and output markets as well as credit and advisory services. Concerns about food insecurity are likely to remain greater in the north, and such concerns may influence

farmers to choose production strategies that minimize risk rather than maximize comparative advantages for market opportunities.

Growth in the Cocoa Sector

Cocoa has been one of the most dynamic components of Ghanaian agriculture and has received the most attention from the government. Several factors have contributed to increases in cocoa productivity and cocoa farmers' revenue:

- Domestic producer prices have been more stable than prices on the world market.
- The producer share of final export prices has been rising steadily.
- Government has actively supported the adoption of new technology and modern inputs used in the cocoa sector.

However, the price of cocoa on the world market has a history of volatility and has shown a declining trend since 2002. This price uncertainty constitutes a potential risk factor for cocoa producers.

The cocoa sector's ability to further reduce rural poverty will be limited, because farmers who produce cocoa already have received large welfare increases, and many of the remaining rural poor are located outside of the cocoa production areas (for example, in the northern savanna). As a result,

efforts to reach Ghana's poor smallholders through agriculture will have to take a broader approach.

Targeting Smallholders

Ghanaian agriculture is overwhelmingly dominated by smallholders; many commodities—including cocoa, maize, and cassava—are produced predominantly on small farms. More than 70 percent of Ghanaian farms are 3 hectares (ha) or smaller in size (Chamberlin 2007). The smallest average holdings are in the south (for example, 2.3 ha at the coast versus 4.0 ha in the northern savanna). Smaller farms tend to produce fewer commodities; for example, farms of 2 ha or smaller produce an average of 3.1 crops; whereas those of 4 ha or larger produce 4.7 crops, on average. Maize and cassava are particularly important crops for the smallest farms, reflecting the importance of these crops to food security strategies under poor or variable market conditions. (For the 12 percent of households that grew only these two crops, the median holding size was 0.8 ha.)

Smallholder market participation rates vary by holding size. Smaller farms produce fewer marketed crops and are less likely to sell the crops they do produce. Participation also varies with geography. The marketed share of farm products and the percentage of farmers who sell their produce tend to be lowest in northern Ghana (Table 1).

Table 1—Percentage of maize farmers who sell their produce

holdings	coast	forest	savanna
< 0.5 ha	57%	53%	42%
0.5-1 ha	65%	60%	31%
1-2 ha	69%	64%	38%
2-3 ha	68%	62%	48%
3-4 ha	62%	58%	57%
4-5 ha	72%	70%	53%
> 5 ha	57%	56%	61%

Source: calculated from Ghana Statistical Services 2007

Holding sizes increase from south to north, but this increase is accompanied by lower land productivity in the north. At the same time, land endowments are more important to farm livelihood strategies in the north, where larger holding sizes correspond to higher household incomes. This finding appears to indicate that efforts to increase farmer incomes should particularly emphasize land productivity in the north, where fewer off-farm opportunities exist.

In contrast, small farmers in the south—especially at the coast—tend to have more diversified income sources. Their smaller holdings are more likely to be compensated by greater off-farm employment opportunities. This fact highlights the need for a diversified set of strategies for enhancing incomes of southern smallholders.

Servicing Smallholders

Improving the productivity of smallholders could enhance their market participation opportunities. This will require the continued development and dissemination of technologies for enhancing productivity. Efforts are also needed to improve the efficiency of input and output market systems to increase smallholder participation. In Ghana, as elsewhere, many interventions have focused on the establishment or expansion of high-value production-market chains. Strategies to accomplish this goal include outgrower and contract farming schemes, assistance for cooperatives, and an emphasis on coordinated support for input, credit, and output markets.

Although spillover effects of cash crop investments on food crop productivity have been identified (for example, via input delivery channels for cash crops [Govereh, Jayne, and Nyoro 1999; von Braun and Kennedy 1994]), the linkages between high-value chains and the marketing of food crops are relatively weak. In addition, the distributional effects of high-value marketing chains probably are biased toward better-endowed farm households. Therefore, pro-poor objectives for developing the export value chain should seek ways to overcome this bias (von Braun 2005).

The majority of smallholders also produce staple crops for the market. For example, maize—the most widely traded crop in domestic markets—relies primarily on the supplies of small farmers. In

parts of southeast Ghana, the marketed ratio of maize produced by small farms is 70 to 90 percent (Kolavalli forthcoming). Focusing too heavily on high-value chains may have a limited impact on domestic market development. In other words, food crops—which are larger in volume—involve more small producers and have stronger linkages for economic growth and poverty reduction.

Developing Food Crop Value Chains

Food crop value chains should be considered from the farmer to the final market. Recent interviews with maize producers in several parts of Ghana suggest that available technologies in many cases do not bring high returns (Kolavalli forthcoming).

Profitability depends also on the conditions of the input and output markets. Even for maize that originates close to a major regional market, transaction costs along the maize chains may be

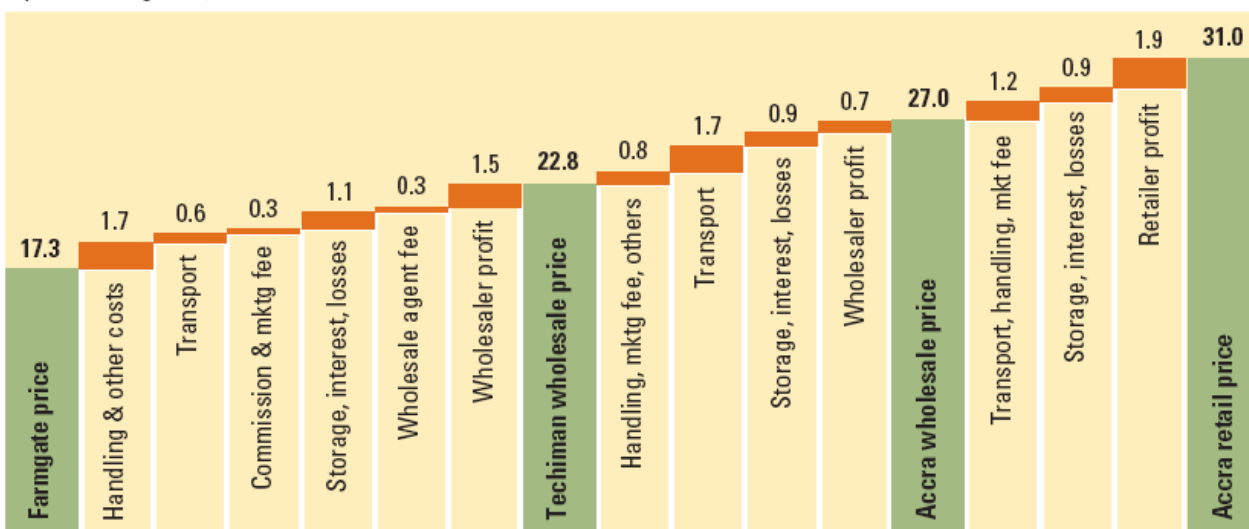
equivalent to 80 percent of the farmgate price (Figure 1). In this example, because of market margins, consumers in Accra pay almost twice the price that farmers receive.

Most of Ghana’s agricultural production takes place in areas that are considerably more remote than the scenario depicted in Figure 1. Moreover, uncertainty about rainfall and prices further constrain development of the food crop value chain in many areas. To increase the efficiency of food crop value chains, transaction costs and vulnerability to risks must be systematically reduced.

In conclusion, development of the food crop value chain is a priority for transforming the smallholder production system and the livelihoods that depend on it. However, policies and interventions aimed at such a transformation will need to address multiple challenges.

Figure 1—Typical marketing costs in the Ghanaian maize value chain

\$ per 100 kilograms, 1998



Source: Personal communication from Natural Resources Institute, 2006, as published in World Bank 2007: 119.

References

- Chamberlin, Jordan. 2007. *Defining smallholder agriculture in Ghana: Who are smallholders, what do they do and how are they linked with markets?* GSSP Background Paper 6. Washington, DC: IFPRI.
- Ghana Statistical Services. 2007. *Ghana Living Standard Survey 2005/06 (GLSS5)*. Accra, Ghana: Ghana Statistical Services.
- Govere, J., T. S. Jayne, and J. Nyoro. 1999. *Smallholder commercialization, interlinked markets and food crop productivity: cross-country evidence in Eastern and Southern Africa*. East Lansing, Mich., U.S.A.: Michigan State University (MSU), Department of Agricultural Economics & Department of Economics.
- Kolavalli, S. Forthcoming. *Diagnostic analysis of maize value chain in Ghana*. International Food Policy Research Institute (IFPRI) Discussion Paper. Washington, D.C.: IFPRI.
- Natural Resources Institute (NRI) 2006. Personal communication. In World Bank. 2007. *World Development Report 2008: Agriculture for Development*. Washington, D.C.: The World Bank. http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf
- von Braun, J. 2005. Small-scale farmers in liberalised trade environment. In *Small-scale farmers in liberalised trade environment: Proceedings of the seminar on October 2004 in Haikko, Finland*, ed. T. Huvio, J. Kola, and T. Lundström. Department of Economics and Management Publications No. 38, Agricultural Policy. Helsinki, Finland: University of Helsinki. <http://www.mm.helsinki.fi/mmtal/abs/Pub38.pdf>.
- von Braun, J., and E. Kennedy, eds. 1994. *Agricultural commercialization, economic development, and nutrition*. Baltimore, Md., U.S. A.: Johns Hopkins Press.

This brief was written by Jordan Chamberlin, Xinshen Diao, Shashi Kolavalli, and Clemens Breisinger. It is intended to promote discussion and has not been formally peer reviewed.

The Ghana Strategy Support Program (GSSP) is a research, communication, and capacity-strengthening Program to build the capabilities of researchers, administrators, policymakers, and members of civil society in Ghana to develop and implement agricultural and rural development strategies. With core funding from the U.S. Agency for International Development (USAID)/Ghana and a mandate to develop a multi-donor-funded Program, the International Food Policy Research Institute (www.ifpri.org) launched GSSP as a partnership between Ghana and its development partners.

For further information:

Shashi Kolavalli, Senior Research Fellow and Program Coordinator
GSSP – IFPRI

Postal Address: c/o IWMI, PMB CT 112, Cantonments, Accra, Ghana

Local Address: Martin Odei Block, CSIR Campus, Airport Residential Area

Tel: +233-(0)-21-780716 • Fax: +233-(0)-21-784752

<http://www.ifpri.org/themes/gssp/gssp.htm>