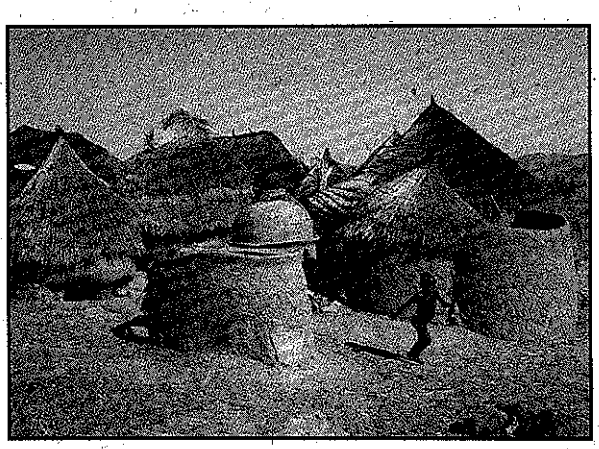
RE-ESTABLISHING AGRICULTURE AS A PRIORITY FOR DEVELOPMENT POLICY IN SUB-SAHARAN AFRICA



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Foreword

The International Food Policy Research Institute (IFPRI) was established in 1975 to identify and analyze alternative strategies for meeting food needs of the developing world on a sustainable basis, with particular emphasis on low-income countries and on the poorer groups in those countries. It is a member of the Consultative Group on International Agricultural Research and receives support from 23 national development agencies and foundations, representing a broad spectrum of countries, including three in the developing world, and six multilateral development organizations. IFPRI is always seeking ways to better communicate and discuss its research results and priorities with a broad variety of food and agricultural system actors in both the industrial and developing countries.

IFPRI also maintains close links with university institutes conducting similar research for similar purposes. One of the institutes IFPRI has long had collaborative links with is the Department of Agricultural Economics (DAE) at the Swiss Federal Institute of Technology in Zurich. DAE undertakes teaching and research on a wide variety of topics in agricultural and resource economics. The Institute's research activities in developing countries are focused on identifying and analyzing measures that contribute to income generation and poverty alleviation in rural areas, especially in Sub-Saharan Africa. As a result of the collaborative links between IFPRI and DAE, it was natural for DAE to invite IFPRI to collaborate when DAE decided to co-sponsor with the Swiss Development Cooperation a workshop that would help foster discussion on key policy themes in African agriculture among a broad variety of African and Swiss nongovernmental organizations, farmers' organizations, policy analysts, researchers, and policymakers.

The result was a workshop using participatory methods held in Neuchâtel, Switzerland, October 30 to November 3, 1994. The workshop was run by the staff of the Swiss Development Cooperation with scientific input from DAE and IFPRI. Its rationale is further described in the preface by Ambassador Fust, Director of the Swiss Development Cooperation. The document that follows summarizes the formal papers presented at the workshop, the workshop discussion, and the conclusions of three working groups.

IFPRI and DAE are very pleased with the sustained participation of all workshop participants and feel that their respective mandates have been substantively advanced by the activity.

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Preface

Three-quarters of the labor force in Sub-Saharan Africa has agriculture as its primary occupation. The concentration of low-income countries in this region is high and under the present trends food insecurity will be growing rapidly over the next two decades. Inadequate national agricultural policies in the north and south have contributed to the poor performance of agriculture in Africa. African national investments in agricultural research, extension, and rural infrastructure have often been inappropriate. They have lacked popular participation and private-sector involvement, and have also been affected by recent austerity measures and by reductions in donor assistance to agriculture.

It is against this background that the Department of Agricultural Economics of the Swiss Federal Institute of Technology, Zurich, the International Food Policy Research Institute, Washington, D.C., and the Swiss Development Cooperation (SDC) joined forces to foster discussions with African policymakers to facilitate more informed choices on policies that will have major effects over the long term. One element of policy analysis was the research collaboration between IFPRI and African researchers, which SDC supported between 1985 and 1991. The results of this research have been discussed with African and non-African policy analysts and researchers and with major policymakers in the countries concerned. The purpose of a workshop held in Neuchâtel, Switzerland, October 30–November 3, 1994, was to analyze the broad implications and to share them more widely with African and Swiss policymakers.

Problem solving requires the active involvement of all the actors concerned. Participants at the workshop were therefore drawn from African policymakers, researchers, and nongovernmental organizations. Issues relating to the role of agriculture in sustainable economic development in Sub-Saharan Africa were discussed extensively during the workshop. The central role of agriculture as the engine of economic and social development was clearly presented, and the importance of macroeconomic and trade policies in conjunction with agricultural policies was highlighted.

Participants formulated recommendations for African policymakers, industrial countries, and development agencies. These were then presented at a press conference given wide coverage by the Swiss media. African governments maintain a key role and responsibility, while participation with local populations and the private sector is a must. The recommendations made by the participants are in line with the guiding principles of the Swiss government for North–South relations and are extremely important for the future activities of SDC. SDC has given high priority to its program in Africa. In 1993, about half the bilateral aid was reserved for Africa and 25 percent of that was devoted to agriculture and rural development. We are fully convinced of the development potential of the African subregion, and the workshop results further confirm this belief. By bringing together the findings and experience of researchers, policymakers, and development workers from Africa and the North, this document should be valuable to all concerned with development in Africa.

W. Fust
Director, Swiss Development Cooperation

1

Introduction

Awudu Abdulai and Christopher Delgado

The agriculture sector dominates the economies of most Sub-Saharan African countries. The sector still accounts for about 42 percent of the gross domestic product (GDP) in low-income countries and for about 27 percent in middle-income countries. Cash crops account for at least 60 percent of export earnings in more than half the countries. Furthermore, between 65 and 80 percent of the labor force is primarily employed in agriculture.

In spite of the dominant role that agriculture plays in the economies of most developing countries, assistance by bilateral and multilateral donor agencies to the sector has declined in both absolute and relative terms in recent years. IFPRI research indicates that development assistance had declined from $12 billion (in 1985 dollars) in 1980 to $10 billion (in 1985 dollars) in 1990, or from 22 percent to 14 percent (von Braun et al. 1993). This trend appears to have accelerated since 1990. Furthermore, bilateral assistance to agriculture by major donors has also declined since 1988 in real terms. Cuts within African national budgets for items such as agricultural research, extension, and rural infrastructure have been even more severe under austerity policies. Despite its overwhelming economic importance in Africa, agriculture accounted for only 7 percent, on average, of African government expenditures in the late 1980s and early 1990s (Cleaver 1993).

These long-term trends in declining resources for agriculture in Africa result from a variety of factors, including a degree of disillusionment stemming from the lack of easy or widespread results. Yet they probably result mostly from a misunderstanding of the true long-term importance of agriculture to economic development in Africa. The chapters that follow attempt to address different aspects of agriculture's special importance in Africa to overall economic growth.

The chapter by Awudu Abdulai and Peter Hazell on the role of agriculture in sustainable economic development explores the prerequisites and priorities for sustainable growth in Sub-Saharan Africa. It argues that agricultural growth will be essential in most Sub-Saharan African countries for achieving economic growth and for addressing poverty, food security and environmental problems. The respective roles of policy, technology, extension, inputs supply systems, and infrastructure in helping or hindering agricultural growth and preserving the environment are reviewed. Suggestions as to the specific kinds of policy changes and investments needed for successful agricultural growth are then outlined.

In his comments at the workshop, participant Rui Ribero[1] stated that, although he agreed in principle with the contents of the paper, he was not fully in agreement with the argument that most national policies in the region have been in favor of models of industrialization. He said that policies have in some cases been in favor of agriculture, but implementation has been the obstacle. He argued that even where governments are willing to implement sound policies, inadequate capacities have often been the limiting factor. Government institutions therefore need to be reformed to improve the quality of such institutions and to promote human capital formation for economic management. Workshop participant Joseph Yao also stressed the critical role of human capital formation at the executive level. The critical issue in structural adjustment, according to Yao, is the responsiveness of exports to economic reform. Since so much of Africa's foreign trade sector is controlled by non-African entities, the need to accompany economic reform measures with a proactive policy for training nationals to take over foreign trade sectors is a strategic issue for growth policy. General discussion of the paper at the workshop

[1]A list of workshop participants is presented at the end of this report.

put greater emphasis on the importance of population issues than in the preworkshop draft.

Strategies for the increased employment of Africa's burgeoning human resource base was a key theme of the workshop. The paper by Christopher Delgado and Jane Hopkins (Chapter 3) examines empirically and in detail, for four countries, the scope for increasing overall growth and employment from increasing export revenue accruing to farm households. Specifically, it examines the potential effects on rural farm and nonfarm production in Sub-Saharan Africa of household income growth from increased rural exports, given the high share of nontradables in African rural consumption and production. It addresses how increased rural incomes are spent on a mix of tradable and nontradable agricultural and nonagricultural goods and services, the potential of these expenditure patterns to stimulate growth in rural areas, and areas of intervention necessary to sustain growth originating from stimulus to tradable agriculture from major economic reforms. In discussing the paper, another participant, Thabi Shange, pointed out that, while smallholder agriculture may be critical in most of Sub-Saharan Africa, it presently does not play a large role in economic growth in South Africa. Yet bridging the gap between a black majority living in rural poverty and a modern, wealthy urban sector is central to the current priorities of the majority-rule government. The critical issue is finding the right set of interventions to stimulate and better integrate marginal areas—"mainstreaming links into the national economy," in her words.

Just as agriculture plays a critical role in employment, so it does in trade. The paper by Ousmane Badiane and Christopher Delgado (Chapter 4) addresses issues relating to the contribution of agriculture to regional economic development. Specifically, for improved domestic agricultural marketing policies, it investigates the need for promoting regional integration on the assumption that macroeconomic policy will provide the incentives for such trade. It shows that improvements in macroeconomic policies are unlikely to contribute to significant growth in intercountry trade unless high transfer costs for agricultural commodities in West Africa can be reduced. What can be done about this in a sustainable fashion is a top priority for policy.

Mamou Ehui made a number of important points in her discussion of this paper. She stressed the diversity of countries even in subregions of Africa, and the implications of this for the heterogeneity of policies toward agriculture. Lack of homogeneity in policy objectives in the region makes regional economic integration via integration of agricultural trade difficult. She questioned the one-way causality in the paper where domestic policy decisions affect trade outcomes, and suggested that trade flows are just as likely to determine domestic policies. Finally, she underlined the importance of technology improvement and domestic policies for improved regional competitiveness.

Beyond the changing domestic incentives for regional trade, major developments in world trade regulation are changing the incentives to African agriculture. The paper by Dean DeRosa (Chapter 5) examines the major elements of the Uruguay Round agreement on agriculture and investigates the implications of the agreement for the trade of Sub-Saharan African countries, in which food imports but also agricultural exports bulk particularly large. Using consensus estimates of changes in world agricultural prices, the effects of the new General Agreement on Tariffs and Trade (GATT) agreement on the trade of African countries in agriculture and other goods are quantified within the framework of a simple international trade model.

Commenting on that paper, Marcel Galiba expressed concern as to whether the developed countries will deliver on the promises they made in the draft agreement, since agricultural lobbies in the OECD countries are quite strong. He questioned the rationale behind the commitment of the industrial countries to ensure food aid to low-income, food-deficit developing countries, instead of committing themselves to help these countries increase their food production. He also felt that a significant prerequisite for increased output, exports, and sustainable growth in Sub-Saharan African countries is the liberalization of world markets, in particular, improved access to the markets of industrialized countries for Sub-Saharan African exports.

The chapters that follow contain abbreviated versions of the revised papers and their individual conclusions. A substantial amount of participant time was spent in working groups after the plenary presentation and discussion of the full papers. Participants were divided into three groups. Group 1, led by Willi Graf, focused on implications for developing countries. Group 2, led by Urs Egger, focused on recommendations for development agencies. Group 3, led by Kathryn Imboden, focused on implications for developed countries.

The terms of references and recommendations of the working groups are contained in chapter 6. These are the conclusions of the workshop as a whole.

2

Prerequisites and Priorities for Sustainable Economic Development

Awudu Abdulai and Peter Hazell

The achievement of equitable and sustainable development remains the greatest challenge facing governments of underdeveloped economies. Despite significant economic progress recorded in some countries in Sub-Saharan Africa in the last decade or so, a substantial proportion of the people in Africa still live in acute poverty and suffer immensely from inadequate access to economic and social resources. Moreover, projections of key socioeconomic indicators predict a bleak future for the region, showing daunting challenges ahead for policymakers.

Given the current preoccupation with structural adjustment programs and market reforms in Africa, it would be easy for policymakers to lose sight of their responsibility to promote long-run and sustainable economic growth. This chapter explores the prerequisites and priorities for sustainable growth in Africa. Drawing heavily on lessons from the past, it examines the necessary conditions and policy priorities for achieving sustainable economic growth. Because most national economies in Africa are based heavily on agriculture, the significance of agriculture as an engine of economic growth is particularly emphasized.

CHALLENGES FACING AFRICA

The percentage of the population under the poverty line in Sub-Saharan Africa hovered around 48 percent during 1985–90, while the number of poor people increased by about 17 percent. By the end of the century, the region will account for more than 30 percent of the developing world's poor, compared with 16 percent in 1985 (World Bank 1990).

The average per capita daily calorie supply in Africa was 2,027 kilocalories during 1986–89, less than the United Nations' recommended minimum. Moreover, while per capita calorie supplies have increased substantially since 1965 in most of the world, they actually declined in Africa (from 2,074 in 1965 to 2,027 in 1986–89 (Rukuni and Anandajayasekeram 1994). Africa now imports about 8 million metric tons[1] of cereals each year, mostly subsidized exports or food aid from the industrial countries, and this import gap is projected to increase to 30–50 million tons per year by 2020 (von Braun and Paulino 1990). Even at this import level, many Africans will still go hungry. Recent work at IFPRI suggests that, by the year 2025, Africa will need to import about 30 million tons of cereals each year to meet the gap between projected market demand and supply, but it will need another 185 million tons of food aid each year if all Africans are to be fed at reasonable standards.

Two other adverse trends that Africa will have to grapple with are rapid population growth and worsening environmental degradation. Sub-Saharan Africa, which had fewer than 100 million inhabitants at the beginning of the century, is likely to see its population double every 20 years, reaching 1 billion by 2010 (World Bank 1992) Such explosive population growth will place an enormous burden on social services and, in several parts of the continent, will so increase pressure on land that it will only be relieved by large-scale migration and urbanization. Over the next 30 years, urban population growth in the continent is expected to average 4.6 percent per year. This pace of urbanization

[1]For the purposes of this report, all tons are metric tons.

poses enormous challenges for the cities of Sub-Saharan Africa.

The rate at which natural resources are being degraded in Sub-Saharan Africa is also a major cause for concern. Closed forest cover is decreasing at a rate of 3.7 million hectares per year, and this is accelerating (Cleaver 1993). Up to 80 percent of Africa's crop and pasture land is also degraded to varying extents by soil erosion. Much of this damage is attributable to rapid population growth and inadequate increases in yields. As low-income farmers search for livelihoods and food, fallow periods are shortened to the detriment of soil fertility, and fragile lands such as hillsides and desert margins are converted to agriculture. These practices are not likely to be sustainable and may threaten Africa's future ability to feed herself.

AGRICULTURE'S CONTRIBUTION TO OVERALL ECONOMIC GROWTH

The agriculture sector dominates the economies of most Sub-Saharan African countries. The sector still accounts for about 42 percent of gross domestic product (GDP) in low-income countries and for 27 percent in middle-income countries. Cash crops account for at least 60 percent of export earnings in more than half the countries. Between 65 and 80 percent of the labor force is primarily employed in agriculture. Unless agricultural growth and rural development improve the real earnings of the rural population, it will be difficult to sustain rapid growth in most African economies.

Available evidence shows a clear statistical link between agricultural growth and overall economic growth. An examination of the growth rates of developing countries whose agricultural share of GDP was greater than 20 percent in 1970 reveals that agricultural growth during the 1970s (1) exceeded 3 percent a year in 17 of the 23 countries whose GDP growth was above 5 percent a year, and (2) was only about 1 percent a year in 11 of the 17 countries whose annual GDP growth was less than 3 percent (World Bank 1982).

There are a number of ways in which agricultural growth contributes to overall economic growth. Among them, (1) the sector increases the exports of agricultural products, which raises income and foreign exchange earnings; (2) it increases the supply of food for domestic consumption and raw materials for domestic industries to reduce the price of wage goods and promote growth in manufacturing, including agro-processing; and (3) it enlarges the size of the market for industrial output.

In developing countries, agriculture also promotes general economic growth through its forward and backward linkages to the nonagriculture sector. The consumption linkages that arise when increases in agricultural income lead to increases in household consumer demands for nonagriculture goods, especially labor-intensive goods and services, are of major significance. Rural households spend large shares of incremental income on local services, housing, durables, livestock, and horticultural products. Ensuring a wider distribution of agricultural income gains among rural households can particularly lead to higher employment and income multipliers as well as help alleviate poverty more rapidly.

Agriculture has also been a major source of capital and revenue for the nonagriculture sector. Nationally, surpluses have been consistently transferred out of agriculture through fiscal, crop pricing, and trade policies. Savings from agricultural income have also been used by private investors as investment funds for nonagricultural pursuits. Evidence from Kenya, Sierra Leone, and Ghana suggests that agricultural savings account for between 15 and 50 percent of nonfarm investment funds (Haggblade, Hazell, and Brown 1987; Abdulai 1994). The indirect economic growth stimulated by agricultural growth also leads to increases in the demand for agricultural products, providing stimulus for further expansion of food crops and livestock production. These demand effects are greatest in the poorer countries because they depend on relatively high marginal budget shares for food.

PREREQUISITES FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT

On the whole, agricultural GDP in Sub-Saharan Africa grew at an average rate of 2.1 percent a year during 1980–91. However, individual country growth rates ranged considerably, from 5.3 percent in Togo to negative rates in Rwanda and Côte d'Ivoire. There was also striking variation over time. A number of countries that recorded negative growth rates during 1970–80 achieved positive growth rates in 1980–91, while other countries that recorded positive average annual growth rates during 1970–80 saw their agricultural sector decline between 1980–91. For example, Rwanda and Côte d'Ivoire achieved average growth rates for agriculture of 7.1 percent and 2.7 percent, respectively,

during 1970–80, but recorded –1.5 percent and –1.2 percent per year, respectively, during 1980–91. On the other hand, Guinea Bissau, Nigeria, and Ghana realized negative agricultural growth rates during 1970–80, but achieved positive growth rates during 1980–91 (World Bank 1993).

Some of these differences in agricultural performance across countries and over time are attributable to differences in agroclimatic conditions and movements in world commodity prices. However, government policies and investment strategies have also played a major role. We attempt now to identify the key requirements for successful agricultural growth.

Appropriate Policies

Trade and industrial policies have a major influence on agricultural performance. In virtually all African countries, traditional agricultural products were subjected to heavy export taxes throughout the 1970s and 1980s, and this reduced prices for domestic producers and discouraged production (Krueger, Schiff, and Valdés 1988). More importantly, the heavy protection accorded import-substituting industries through trade and macro policies penalized agricultural producers by lowering the price of farm products relative to the price of protected industrial output, by increasing the cost of industrial inputs to agricultural production, and by inducing real exchange rate appreciation that reduced the domestic prices of agricultural export crops. The effects of policies that indirectly influence agricultural prices is often far greater than the effects of policies that directly attempt to influence agricultural prices. A number of empirical studies have demonstrated that a large proportion of industrial protection in African countries during the 1970s resulted in an effective tax on agricultural exports (Oyejide 1989; Abdulai 1994). Major reforms of macroeconomic and industrial policies that discriminate against agriculture are therefore required.

Appropriate Technologies

Since most of the region is at a very early stage of agricultural technology, there is a need for increased support for agricultural research to raise productivity. In the labor-constrained systems (widely observed in West and Central Africa), technologies that permit rapid increases in labor productivity are essential (Delgado and Pinstrup-Andersen 1993). Since there is relatively abundant land in these areas, technologies oriented toward sustainable land use will be key to agricultural growth. On the other hand, yield-enhancing technologies are probably urgent for the land-constrained systems, which tend to predominate in Eastern and Southern Africa, since the scope for continued expansion of production by bringing new land into cultivation would appear to be limited.

Given the often fragile soils in Africa, erratic rainfall patterns with significant drought risks, limited scope for irrigation, poor infrastructure, and high transport costs, agricultural intensification will typically have to be different from the Green Revolution model. In many areas, it will require development of mixed farming systems that integrate annual crops with perennial crops, farm trees, and livestock in order to improve management of soil fertility and organic matter, to conserve moisture, to control erosion, and to generate and recycle plant nutrients. It will use low to moderate levels of purchased inputs such as fertilizers and pesticides. The kind of research needed to develop appropriate technologies and practices will often be site-specific and will involve farmers in its design and implementation.

Biotechnology also offers significant potential for increasing the returns to agricultural research, but the small size of many African countries and the weakness of their traditional plant breeding programs (which will be needed to utilize biotechnology products) may not allow them to share in the potential offered by biotechnology. This should be a matter of some concern for the donor community. There is urgent need to increase support for agricultural research to emphasize the development of technologies for sustainable farming and natural resources management and to forge links with centers of biotechnology research. Governments must also play an active role in the provision of extension services capable of disseminating relevant information to farmers, and in encouraging nongovernmental organizations (NGOs) working on research and extension problems.

Agricultural Inputs and Rural Infrastructure

The provision of agricultural services also needs to be made more efficient. In many Sub-Saharan African countries, shortages of subsidized inputs, together with high rates of farm input subsidies, lead to situations in which a few large-scale farmers appropriate most of the inputs. In some cases, these inputs are then resold to the underprivileged farmers at exorbitant prices. Subsidies that favor large-scale farmers rather than low-income farmers contribute to the bias in the structure of income growth against small farmers.

Inadequate credit has also contributed to the limited expansion of farm input markets in Sub-Saharan Africa. This problem is particularly distinct in areas where the period between the last harvest and the next growing season is relatively long. Although governments have long recognized the need to provide institutional financing for agricultural production, credit generally has not been made available to small-scale farmers. Reform of the rural financial system is necessary, particularly if small farmers are to receive adequate credit. Competition could be enhanced by eliminating regulations that constrain competition and by reducing the transaction costs of setting up rural banking networks.

Transport and communication infrastructure is an important constraint on agricultural productivity in low-income developing countries. Rural roads and transport systems, which constitute perhaps the most important single factor for transforming rural Sub-Saharan Africa, have deteriorated to the point where costs of transport add significantly to the costs of inputs and outputs in agriculture. The higher the cost of transport and other transactions associated with agricultural trade with outside markets, the smaller will be the scope for macroeconomic policies to actually determine relative prices. Improvement of road and transport facilities in rural areas may therefore be crucial for farmers to use purchased inputs. Governments must play an active role in mobilizing resources for rural infrastructure creation and in improving the access of small farmers to such infrastructure to support agricultural development.

Managing the Environment

Agricultural intensification can lead to the mismanagement of modern inputs, especially fertilizers, pesticides, and irrigation water, often with serious environmental consequences. These include waterlogging and salinization of irrigated land, chemical contamination of water, pesticide poisoning, and destruction of beneficial species. Africa has largely avoided these problems so far—one of the few blessings from not having widely participated in a modern Green Revolution. Nevertheless, policymakers need to be aware of the dangers associated with agricultural intensification and to avoid policies such as pesticide subsidies, underpricing of water, and inefficient irrigation management systems that can foster mismanagement of inputs.

The more serious environmental problems in African agriculture relate to the mismanagement of resources in extensive farming systems. Poverty and population growth have reached the point where serious resource degradation is occurring. Without adequate increases in agricultural productivity to secure their livelihoods, farmers expand into new areas, many of which are environmentally fragile and easily degraded. Environmental problems associated with rainfed farming include conversion of primary forest to agriculture, with loss of biodiversity, climate change, and exposure of fragile soils; expansion into steep hillsides, resulting in soil erosion and lowland flooding; degradation of watershed protection areas; shortened fallows with loss of soil nutrients and organic matter, resulting in declining yields; increased pressure on common property resources, such as woodlands and grazing areas, with breakdown of indigenous institutions that regulate and manage these resources, leading to open access regimes and resource degradation; and declining resilience in ecosystems, with reduced ability to rebound from stresses such as droughts.

Although agricultural intensification will be essential for relieving the pressure on natural resources and containing further degradation, the required intensification must be based on the kind of appropriate technologies and farming systems described earlier. In many cases, it will also require that property rights be reformed, both to assure secure rights over settled farm land and to strengthen community rights over common property resources such as grazing areas, forests, and woodlots. In addition, more effective communal organizations for managing common property resources, for undertaking soil erosion control and moisture conservation programs, and for dealing with public institutions that are intended to serve fragile areas (especially research, extension, and credit agencies) will have to be achieved. Improved infrastructure and markets for inputs and outputs are also essential.

CONCLUSIONS

This chapter argues that agricultural growth will be essential in most African countries for achieving economic growth and for addressing poverty, food security, and environmental problems. The kinds of policy changes and investments needed for successful agricultural growth have also been suggested. But can this potential be realized within the institutional and market constraints that currently exist?

National systems of governance and entrenched interest groups make needed policy reforms difficult. Regimes want to stay in power, and they often

choose inefficient economic policies to maintain political stability. Departures from this model can be perilous. For example, after the Zambian government removed food price controls in the 1980s to provide better incomes for farmers, riots erupted in the urban areas, leaving a large number of people dead. In the end, the government had to reverse its policy on food pricing, which the International Monetary Fund had recommended. Clearly, social and political reforms are required to provide a conducive environment for needed policy reforms, and sometimes it takes a major macroeconomic crisis to bring about the necessary realignment of social and political forces. Nevertheless, recent progress with structural adjustment programs in many African countries suggests that there is now greater willingness to consider policy reforms that would have been unthinkable only a short time ago.

Export markets could also become an important constraint. World market prices for traditional agricultural exports from Africa have declined sharply since the mid-1980s, leading to deteriorating terms of trade for the region. Given saturated world markets, there would be obvious difficulties if many African countries tried to increase their traditional exports at the same time. Agricultural growth will therefore have to be increasingly based on export diversification, including production of new products. Although progress on this front has been limited in much of Africa, there are grounds for optimism. Recent empirical studies on diversification of exports in a number of African countries reveal that the macroeconomic and trade policy reforms undertaken in the 1980s had significant positive effects on the supply response of nontraditional exports (see, for example, McQueen 1991). A reasonable conclusion from these studies is that an appropriate incentive structure and realistic exchange rate system can significantly increase the exports of nontraditional products.

The limited prospects for the exports of Sub-Saharan African countries to the markets of industrial countries suggests that it might be worthwhile to promote regional economic cooperation. While a number of empirical studies have demonstrated that a favorable potential for intraregional trade exists (Badiane 1991; Abdulai and Egger 1992), inward-looking industrialization strategies that prevailed in most of the countries in the region during the 1970s and early 1980s retarded the growth of regional trade. Here again, the ongoing policy reforms in the region will contribute positively to regional economic cooperation. A first step toward the establishment of an African Economic Union was also realized within the Abuja agreement, which stipulates the coordination, harmonization, and gradual integration of the activities of existing sub-regional groups. These promising beginnings need to be aggressively pursued by African countries.

3

The Impact of Changing Export Sector Incomes on Local Rural Economies in Sub-Saharan Africa

Christopher Delgado and Jane Hopkins

This chapter examines the potential effects of household income growth from increased rural exports on rural farm and nonfarm production in Sub-Saharan Africa. IFPRI recently investigated this topic through in-depth case studies in Burkina Faso, Niger, Senegal, and Zambia (Delgado et al. 1994). The research examines how increased rural incomes are spent on a mix of agricultural and nonagricultural goods and services; the implications of these expenditure patterns for the potential to stimulate growth in rural areas; and areas of intervention necessary to sustain growth originating from stimuli to tradable agriculture from major economic reforms.

RURAL GROWTH LINKAGES IN AFRICA

The very high cost of transporting goods to and from consuming points in rural Africa implies that surges in local demand for many major consumer items, including food staples, would have to bring about large price increases before these items would become profitable enough to pay for the cost of importing them. The persistence of high transport costs and other barriers to trade in rural Africa also imply that rural primary resources, such as labor and land, can remain underused for long periods of time, even if policy reform programs act to remove major macroeconomic barriers to trade. Where underused local resources exist, sustained increases in household incomes can potentially stimulate production of local farm and nonfarm goods and services that could not otherwise be sold.

Thus, just having new local income from outside the region brings farmers added income through new spending on local goods and services that would not otherwise have been sold. This phenomenon is called "consumption growth linkages." An example is found in another IFPRI study of three agroecological zones of Burkina Faso in the early 1980s. Women's absolute income and their share of total household income were highest in the cotton zone, even though most cotton payments went to men (Reardon, Delgado, and Matlon 1992). Women's income in this case came from sales to cotton producers of locally brewed sorghum beer, processed foods such as millet cakes, handicrafts such as woven mats, and other locally produced items. These growth linkages diminish once the initial income source from trade outside the local region stops.

Growth linkages occur because underemployed resources, such as seasonally underemployed labor or vacant land, are drawn into production by new local demand for things that they can produce. Resources are underemployed because there is insufficient local demand to purchase the end products; nonlocal demand is not a factor due to high transport costs. This situation typically is caused by remoteness and poverty.

"Nontradables" are goods that, at prevailing relative prices, are rarely, if ever, traded across the borders of the chosen zone of analysis, and do not have close substitutes in local consumption. Services, for example, are nontradables, since the service occurs at the point of purchase. Tradables, on the other hand, can by definition always be imported or exported at a constant price given by the world outside the region in question.

Growth linkages were estimated in the case studies as regional growth multipliers: they measure the amount of extra income generated in a region

from stimulating new production of goods and services through the increased consumer and intermediate spending that arises from an initial boost in household incomes. A growth multiplier of 2, for example, implies that one new unit of household income from higher yields or new cash cropping would eventually add a second unit of income from new production of nontradables induced by household spending of the initial unit, such that the total income increase in the region is two units. Multipliers are numerical derivations from regional models that incorporate household demands and intermediate demands between sectors.[1] The model assumes that net new demand for local nontradable items is met by net new local production of these items. The highest possible net new production of nontradables that will be induced if local rural incomes rise is estimated. Actual results may be up to one-third lower.

EMPIRICAL RESULTS

African rural growth linkages are much higher than previously thought. The additions to income from adding a dollar of new farm income in the study zones from new exports is to increase total rural household income by US$2.88 in Burkina Faso, $2.48 in Zambia, $1.97 in Senegal, and $1.96 in Niger. Similar results were found by geographic region, by income group, and under a variety of different assumptions. Detailed investigation shows that the share of farm linkages attributable to final consumption was 42 percent in Senegal, 79 percent in Niger, 93 percent in Burkina, and 98 percent in Zambia.

Services, nontradable farm commodities, and local nonfarm goods account for most of the extra growth induced by increased household spending. The study measured the percentage of total household expenditures—the average budget shares (ABS)—going to each good and service group. Marginal budget shares (MBS) were estimated through econometric modeling. They measure the percentage of additions to income that are allocated to the goods in question, and thus the direct effect of income changes on the consumption of the group of goods in question.

The study classified individual commodities and services into two sectors, farm and nonfarm, and two tradability categories, tradable and nontradable, for three alternative definitions of region of interest (local, national, and West Africa).[2] The farm sector is defined as crops and livestock products in unprocessed or barely processed form. This has two consequences. First, nonfarm includes those items that result from the off-farm activities of farm households, including food processing. Second, taking into account the nonfarm activities of farm households leads to the conclusion that nonfarm activity is high in rural Africa. Nontradables in the study included services, prepared foods that were not packaged for transit (such as sorghum beer and millet cakes), fresh meat and dairy products, some fruits and vegetables, most prepared foods (such as peanut butter), and some starchy staples, including millet and sorghum in some cases, and cassava, sweet potatoes, and *fonio* in all cases.

The average share of household total expenditure (in cash and kind) spent on food in the case studies runs from 85 percent in Burkina Faso to 72 percent in Senegal. The shares of increments to income going for food, in all cases, are still so high that the absolute effect on food demand of an increase in rural incomes will still be quite large, even though it is decreasing over time as income increases. Improvements in incomes in the study zones can be expected to put demand pressure on food supplies in the foreseeable future. In poorer areas, this pressure will be more on basic staples. In richer areas, it will be on higher priced (more preferred) calories, since consumers are sufficiently better off to begin the process of substituting higher priced calories (such as rice and fish) for lower priced ones (such as millet) as income rises.

The marginal budget share for nonfood commodities is high only in Senegal, at 51 percent; it is 22 percent in Niger, 19 percent in Zambia, and 14 percent in Burkina Faso. Demand for these items as a whole rises more rapidly than incomes in all the sample zones, yet the average amount spent on these items is small. The same is true of services, which have marginal budget shares ranging from 16 percent in Niger to 3 percent in Senegal. In Zambia, 75 percent of all consumer expenditures in the sample were on nontradables defined at the national

[1]Technically, the modeling approach used is a four-sector semi-input–output regional model with fixed prices for the two nontradable sectors. Readers interested in further discussion of the technical side of the study are referred to the works cited in the list of references or invited to contact the authors for details.

[2]This breakdown was not possible with the Zambia data, although some broad assumptions could be tested.

level; most of these were on farm goods. Two-thirds of increments to income went to nontradables, as was the case in Burkina Faso. The marginal budget share for nontradables was 47 percent in Niger and 25 percent in Senegal.

Detailed analysis of the expenditure data in the country case studies shows that rising rural incomes in the study zones, should they occur, are likely to greatly boost rural demand for many farm goods, mainly local, unprocessed food items; some nonfarm goods, including processed foods and intermediate inputs to farming; and services. Many of these items are nontradable. This will either encourage increased production of these items or put considerable upward pressure on their relative prices.

The importance of consumption patterns oriented to local farm and nonfarm goods and services shows that boosting incomes of the poor is good for growth as well as equity. Asian growth linkages literature stresses that, because the consumption patterns of the rural rich are oriented to spending increments to income on manufactured goods and services, targeting income to the rich rather than to the poor will have a greater stimulative effect on demand for nonfarm items than the same income targeted to the poor. In all of the country case studies, the poorest one-third of households are likely to spend more of their additional income on nontradable items than the richest one-third of households. This implies that a dollar of income directed to the poor will have more linkage benefits for growth than a dollar directed to the rich, all else held constant.

CONCLUSIONS

The scope for demand-led growth in Africa is much greater than previously thought. Growth strategies focused on rural Africa need to be based on a better understanding of the nature of consumption patterns and of the determinants of substitution between the things that rural people consume or produce and those that they can import or export. These relationships are formed in an environment of high transport costs and other barriers to trade that policy reform programs can only partially address. This suggests that pressures on the prices of some items are likely to develop in economies that have begun to move; sectoral policies can contribute to maximizing growth that is already under way by helping avoid foreseeable supply bottlenecks and by capitalizing on new demand-led opportunities. Because of the importance of the demand side, the type of export-led growth strategy adopted matters greatly to the final outcome. This research, however, while stressing the need for export-led growth, does not indicate where initial income growth will come from. It does, however, explain the necessary attributes of such growth.

Only sustained growth in rural incomes that is widely spread across households is capable of unlocking significant additional growth. Restoration of the demand side as a valid issue in Africa, through its focus on the constraints on rural income growth imposed by inadequate local demand, illustrates that widespread increments to the incomes of rural households can play a major role in mobilizing underused resources. The effect of widespread increases in spending on the kinds of nontradables that rural people consume—foods, including dairy, fruits, vegetables, and some starches; services; local agricultural implements; and so forth—can mobilize labor, capital, and land outside peak periods for viable income opportunities. The study shows that even small increments to rural incomes that are widely dispersed can make large net additions to growth, besides improving food security.

Only growth in smallholder agricultural and livestock exports provides the widespread and recurring income source needed for an economically sustained rural growth process. For growth linkages to be part of a sustained pattern of economic development, the initial income shock from the tradable sectors must be regularly reproduced. Only the sustained production and sale of tradable commodities can do this. Conventional wisdom suggests that traditional agricultural exports, such as peanuts, cotton, or livestock, are most likely to play this role.

In the absence of regularly recurring sources of household demand, technological change, lending, or other stimuli to the nontradable sectors are only likely to lead to mountains of unsold produce by the roadside—as in the maize mountains of the middle belt in Nigeria in the late 1970s. Such mountains of unsold produce also mean falling producer revenue despite production increases. Without a regularly recurring injection of income from trade with locations outside the immediate zone of interest, the myriad activities in the nontradable sectors dependent on the demand thus created will wither: growth multipliers presumably work in reverse as well.

Sustaining growing populations on fragile resource bases, as in the Niger case study zones in particular, requires providing a growing supply of jobs outside agriculture. Paradoxically, the linkage work shows that incomes from agricultural trad-

ables are necessary to support the creation of nonfarm jobs in rural areas through boosting local demand for nonfarm goods and services.

More attention needs to be devoted to increasing supply-responsiveness of major nontradable rural consumption items, including local starchy staples and livestock products. Realizing the growth potential offered by strong demand linkages will require a price-responsive supply of those things that rural people wish to consume more of as their incomes go up. Further research should look at the issue of how policy can increase the supply responsiveness to prices of those nontradables that currently attract the largest shares of additional spending or income increase, such as local coarse grain products, dairy products, and fresh meat. The high average expenditure share for starchy staples suggests that—despite slightly income-inelastic demand—they can form either a prime source of or a major bottleneck to growth.

If prices of nontradable consumer items rise relative to export prices, which are fixed by world market conditions and marketing costs, it becomes relatively less profitable to engage in export agriculture. The result is that success in export promotion begets a rise in the cost of the labor used to produce a unit of exports, leading to a fall in sales and a halt to the process of growth, unless forward-looking policy investment occurs to break the vicious circle.

4

Macroeconomic Policies and the Contribution of Agriculture to Regional Economic Development

Ousmane Badiane and Christopher Delgado

Agricultural production in West Africa is highly variable from year to year. High transport costs for bulky items make it two or three times as expensive to buy agricultural products imported from world markets inland as in West African ports. Furthermore, regular supplies of food and foreign exchange from agricultural exports are of vital importance to economic growth. As a result, policy measures to promote broader regional integration of agricultural markets in West Africa might be thought to be the cornerstone of economic growth strategies in the region.

But only recently—at the end of the 1980s—have West African policymakers paid attention to the problems of regional trade in agricultural products. Only after the market shares of West African agricultural exports fell and world markets crashed for cocoa, coffee, vegetable oils, and cotton in 1981 did policymakers consider extending to agriculture—particularly the food sector—common tariff protection of the type previously put in place for infant industries. In this context, IFPRI launched four years of collaborative research with several Sahelian national institutes in 1988 to study the national macroeconomic and sectoral policy constraints to regional agricultural trade.[1]

NATIONAL SECTORAL POLICIES

What scope is there for national sectoral policies to improve regional trade flows in agriculture? Studies carried out in Burkina Faso, Mali, and Senegal estimated that transport and other transfer costs ranged from 60 to 300 CFA francs per tone per kilometer, equivalent to 50 to 75 percent of the final cost of the goods at terminal markets. As a result, the economic cost of a ton of grain at consuming points inland was more than twice the cost of grain at the port of entry (Gabre-Madhin, Diarra, and Staatz 1992; Savadogo, Slack, and Delgado 1992; Gaye 1992). Moreover, the studies showed that transfer costs per unit decline with distance and size of shipment and that they are highly variable across space and time for otherwise comparable shipments.

Although reforms are currently under way in most West African countries to liberalize domestic marketing, the obstacles to increased trade are still formidable in the context of only partial liberalization of markets. The nonexistence of related input or output markets can completely vitiate liberalization of a given product market, as shown in a study of Senegal by Gaye (1992).

Generally, the high level of transport and other marketing costs relative to output prices means that there is considerable latitude for sectoral policies that lower costs of distribution to assist macroeconomic reforms in restoring the competitiveness of economies. They do this by keeping production and distribution costs low. They also prevent them from rising in response to economic growth, by facilitating the importation of inputs and wage-goods such as food.

REGIONAL INTEGRATION SCHEMES

Should institutional regional integration schemes that ignore major macroeconomic and trade policy

[1]With support from the Swiss Development Cooperation.

distortions be considered a "first step" in integration with the world economy? Two dangers lie in building "fortress West Africa" against imports from world markets: first, one can gain a false sense of security that the problem of agricultural stagnation is being dealt with, and, second, heavy macroeconomic and trade regime distortions may negatively affect the capacity of West African countries to trade with each other.

Inward-looking economic strategies pursue internal, country-specific objectives that are fundamentally unsuitable for multinational implementation. Protectionist strategies to promote domestic sectors are also likely to lead to interference with trade flows to and from neighboring countries. Country strategies biased against trade therefore offer limited scope for sustained intercountry trade expansion through mutual tariff concessions and other institutional arrangements. Furthermore, antitrade strategies reduce the propensity to import from regional sources: (1) they encourage high-cost production structures in the region, and (2) they induce a shortage of foreign exchange over time through the relative disincentive to produce for export. In most cases, countries respond to foreign exchange crises by using various mechanisms of foreign exchange control, such as import bans, licensing, and foreign exchange rationing.

It is now also accepted that inward-looking macroeconomic and trade policies have significant effects on the performance of the export sectors through their effect on the real exchange rate (Clements and Sjaastad 1984; Dornbusch 1974; Edwards 1989; Krueger, Schiff, and Valdés 1988). There is by now growing evidence that restrictive trade policies biased against agriculture have harmed export sectors in most countries in West Africa (DeRosa 1992; Salinger and Stryker 1991; Stryker et al. 1987; Oyejide 1986; and World Bank 1987).

It is in fact likely that exports to regional markets have suffered from national trade regimes. Simulation results based on data from Côte d'Ivoire and Senegal (Badiane 1992, 1994) confirm the link between macroeconomic policies and regional trade. They show strong multipliers between selected macroeconomic policy indicators and intercountry trade flows. Inward-looking regional trade regimes that ignore national macroeconomic distortions not only protect against imports from outside the region, they also make regional products less attractive and less affordable to regional buyers. In deciding to tax and restrict trade, countries also compromise their capacity to export to regional markets.

Country macroeconomic policies in West Africa have also negatively affected long-term income growth, and thereby the capacity to raise and sustain demand on regional markets. Strong, positive relationships have been shown to exist between the expansion of exports and the rate of growth in the agriculture sector, on the one hand, and the rate of overall economic growth, on the other hand (Balassa 1978; Rangarajan 1982; World Bank 1982; Bautista 1988; Panchamukhi et al. 1989; Hwa 1989; Ahluwalia and Rangarajan 1989; and Lächler 1989).

THE OUTLOOK FOR REGIONAL AGRICULTURAL EXPORTS

Can regional markets substitute for international markets without changes in prevailing trade regimes and macroeconomic policies? The research suggests that this is infeasible unless there are policy reforms.

Groundnut Trade and Regional Oilseed Markets

After dominating international trade in groundnut oil for years, African exporters, mainly the member countries of the African Groundnut Council (AGC)[2] have suffered tremendous losses in market share to competing vegetable oils originating outside the region. A study by Badiane and Kinteh (1994) shows that groundnut oil exports from member countries fell on average by nearly 4 percent annually between the early 1960s and the late 1970s. At the same time, competitors from Asia and South America were able to raise their combined share of world exports of groundnut products from slightly over 10 percent in 1962–67 to 50 percent in 1986–88. As a result, AGC's export share fell from more than 60 percent to as low as 20 percent during the same period. The fall in exports is paralleled by a marked decrease in groundnut production.

These dramatic changes took place despite the relative stability of world demand for groundnut products during the same period. Together with the impressive expansion of Asian and South American trade shares, this seems to contradict the argument of external demand constraints. The study reveals that developments in world prices accounted for only 20 percent of the fall in export revenues. The remaining 80 percent were induced by declining export quantities, indicating that supply-side factors

[2]AGC member countries are the Gambia, Mali, Niger, Nigeria, Senegal, and Sudan.

must have played a predominant role in the weakening of AGC countries' export performance. The study also shows that the effects on incentives in the domestic groundnut sectors resulted from rural sector as well as overall macroeconomic policies and trade regimes. These were strongly negative, especially during the 1970s, a period when the world groundnut economy was booming while AGC countries suffered strong losses in market shares.

The resulting effect on the production and exports of these countries has been quite significant. The estimated induced reduction in output levels has been as high as 35 percent in individual countries and 15 percent for the entire group. The reduction in country output has translated into considerable losses in groundnut exports. At the prevailing export prices, the reduction in export quantities meant export revenue losses of 20 to 70 percent for individual countries.

Given these results, it is not surprising that AGC exporters have played only a marginal role in regional markets, despite the fact that demand in African markets for oilseeds products grew more than two-and-one-half times faster than demand in world markets during the study period. Furthermore, overemphasizing the role of global market conditions in explaining West Africa's trade woes could unnecessarily delay the adoption of measures that would go a long way toward addressing the basic problem of the domestic environment for production and trade.

Demand Constraints and Regional Trade in Livestock

The Sahelian share of total beef supply (by volume) in Côte d'Ivoire fell from 65 percent to 28 percent during the 1980s, while the share of frozen beef imports from non-African sources, primarily the European Economic Community (EC), increased from 16 percent to 44 percent during the same period. Conversely, the ratio of the average price of fresh West African beef relative to frozen imported beef in Abidjan wholesale markets went from 42 percent in the 1970–72 period to 194 percent in the 1987–89 period. In real terms, wholesale prices of imported frozen beef in Abidjan in 1987–89 were only 17 percent of average wholesale prices for imported frozen beef in 1970–72. Furthermore, annual export receipts of the interior countries for live cattle sent to Côte d'Ivoire fell to roughly US$20 million in 1991 dollars in the latter period, or one-fifth of the 1970–72 average level.

Delgado and Lent (1992) investigated whether the decline in the market share of the Sahelian countries on the coast is a demand-driven or a supply-side phenomenon. In particular, they explored the scope for sectoral price policies, such as a recently-imposed countervailing tariff on EC beef exports to Côte d'Ivoire to shift Ivorian consumption back toward West African products. They found that, whereas a 1 percent rise in the price of imported European frozen beef would boost demand for Sahelian cattle by 0.4 percent, a 1 percent decrease in the supply price of Sahelian cattle would provoke a 1.3 percent increase in demand for Sahelian beef, to the extent that the price decline was passed through to consumers. This is consistent with the view that supply issues within the Franc Zone prior to devaluation were central to explaining falling competitiveness.

The main conclusions of the study were (1) a 1 percent tariff on EC frozen beef would lead to more than a 1 percent decrease in consumption of this commodity, but the effect in the early 1990s is likely to be less strong than it would have been in the 1970s; (2) interventions that decrease relative prices for fresh West African beef (infrastructure, real devaluation) will have at least as large an effect on the relative shares of EC and West African beef as a tariff on non-African meat; (3) the big substitute for West African fresh beef in the 1970s was frozen fish, not frozen beef—penetration of the former may have helped the spread of the latter; (4) a tariff on fish might have worked in the 1970s but not now; and (5) with the resumption of overall growth, the fresh West African beef sector will be better off than many.

Anecdotal evidence in West Africa at the present time suggests that the devaluation of the CFA has had exactly the effects predicted in the Central Sahel. The Sahelian countries have largely recouped their market share in Côte d'Ivoire, frozen fish sales have fallen, and fresh beef prices have risen by about 80 percent.

CONCLUSIONS

In the context of narrow and fairly unstable markets that characterize agriculture in many parts of Africa, effective use of regional trade as a stabilizing device is essential. It is dangerous to consider institutionally based regional trade schemes that work through external tariff barriers as first steps in regional economic integration, especially where national policies undermine the competitiveness of regional markets. Regional integration in the context of distorted macroeconomic and trade policies

is likely to fail for four reasons: (1) export sectors in countries of the region are not competitive on regional markets compared with outside countries; (2) countries with distorted policies grow only slowly, if at all; this constrains regional demand for imports from regional trade partners; (3) foreign exchange shortages associated with distorted trade and macroeconomic policies induce national governments to adopt licensing and other control measures that unavoidably disrupt border-crossing trade flows; and (4) national policies biased against agriculture reduce and limit the role agriculture can play in regional economic development. The main policy implication of the analysis presented here is that the promotion of regional trade and integration through multinational institutions and regional regulations is not a viable alternative to the necessity of eliminating the bias in country macroeconomic and sector policies if regional trade is to grow. Nominal devaluation of the type observed in the Franc Zone in January 1994 is a vital first step, but it is only the beginning.

5

The Uruguay Round Agreement on Agriculture and Sub-Saharan Africa

Dean A. DeRosa

Agriculture occupied center stage in the recent Uruguay Round of multilateral trade negotiations, which brought together the differing interests of industrial and developing countries in promoting greater international trade in the world economy, under the auspices of the General Agreement on Tariffs and Trade (GATT).

The developing countries did not uniformly support reform of agricultural policies during the Uruguay Round negotiations. In particular, many low-income, food-importing countries feared that global liberalization of agricultural trade would raise the costs of their food imports. However distorted international trade in agriculture had become prior to the Uruguay Round, some developing countries viewed themselves as beneficiaries of the international spillover effects of the Common Agricultural Policy (CAP) of the European Union countries and similar, trade-distorting, agricultural policies in other industrial countries.

This chapter discusses the Uruguay Round agreement on agriculture and investigates in quantitative terms its implications for the international trade of Sub-Saharan Africa, especially its trade in food and agriculture. It especially looks at the effects of the multilateral reforms to agriculture on those countries for which both food imports and agricultural exports are important.

THE URUGUAY ROUND AGREEMENT ON AGRICULTURE

Until the Uruguay Round, agriculture remained mainly outside the periodic GATT negotiations to liberalize world trade. The so-called U.S. agricultural waiver in 1955 later provided the basis for establishing the consistency of the CAP with GATT rules forbidding the use of prohibitions, quotas, and other quantitative restrictions on trade. Even before the waiver, however, the widespread use of quantitative restrictions to support the administered systems that regulate production and trade of agricultural goods in many industrial and other high-income countries was not limited by the GATT in any serious way. Ostensibly, these restrictions were imposed to uphold national food security objectives, but highly concentrated interests in the agriculture sectors of the high-income countries held enough political power to maintain high protection levels for their output, and thus they resisted multilateral efforts to liberalize trade in agriculture.

Agricultural liberalization could not be sidestepped during the Uruguay Round, however, given the steeply rising fiscal costs of price support and export subsidy programs for farm commodities in the European Union and the United States. Moreover, the maintenance of high protection for agriculture was increasingly recognized as incongruous with the average low protection for manufactures achieved by the previous rounds of multilateral trade negotiations under the GATT.

At the outset of the Round, interests were clearly divided between two influential groups of industrial and developing countries. The first, the United States and the Cairns Group (an independent bloc of agricultural exporting countries), supported thoroughgoing reform of agriculture. The objectives of the European Union and Japan, the second group, were more modest with regard to reform of domestic policies distorting international trade in agriculture. This division of interests, in fact, proved very difficult to overcome throughout the negotiations.

Nonetheless, it was generally accepted that domestic farm support programs must be liberalized in order to "validate" the liberalization of border measures distorting trade in agriculture. In this con-

nection, the negotiations came to categorize domestic policies according to two "boxes," to which a new empirical measure, the aggregate measure of support (AMS), could be applied to assess and monitor the effects of domestic agricultural policies on international trade. Domestic policies viewed as nontrade-distorting, such as advisory services, domestic food aid and safety-net programs, environmental protection measures, and decoupled income support payments, were assigned to one box. The second box basically contained all other domestic support policies, including the European Union system of price maintenance and the United States system of deficiency payments. These were deemed the proper objects of multilateral negotiations because they are geared more directly to controlling farm output levels.

The other primary elements of the negotiations on agriculture dealt with export and import border measures. Concerns about export subsidies were especially important, given the competition in costly export subsidies for wheat and other grains that erupted during the 1980s with the adoption of the U.S. Enhanced Export Program. The negotiations centered on reducing the extent of volume-related export subsidies, using an aggregate measure similar to the AMS applied to domestic support measures.

Finally, the negotiations on import measures sought to incorporate a cornerstone of the GATT, namely that protection measures should be limited to ad valorem tariffs. The economic rationale underlying this principle was that the price system is more efficient than administered economic systems in allocating resources to productive uses and enabling consumers to purchase imports without limit. Also, relying solely on tariffs to regulate imports results in greater transparency of protection and is more amenable to increasing market access in future rounds of multilateral trade negotiations.

The Uruguay Round negotiations were finally concluded in late 1993 and ratified during 1994. Under the terms covering market access, the major accomplishment of the agreement on agriculture is the replacement with ad valorem tariffs of all nontariff barriers (NTBs) and the stipulation of a 36 percent reduction, on average, of bound tariff rates over the six-year period of the agreement. Under lax rules, many countries bound high tariff-equivalent rates of protection, provided that minimum access was guaranteed for restricted import categories. These rates, amounting initially to 3 percent of domestic consumption, were established through the tariff-rate quotas in contradiction of GATT principles. Under domestic subsidies, only a limited number of the items originally placed in the second box are subject to a reduction of 20 percent, based on AMS calculations, over the horizon of the agreement. And finally, under export competition, expenditures on subsidies and the volume of subsidized exports must be reduced by 36 percent and 21 percent, respectively, over the six-year period.

These terms apply mainly to industrial countries and advanced developing countries. For other developing countries, the provisions of the Uruguay Round agreement on agriculture are less stringent, under the rubric of "special and differential treatment" for developing countries. In the main, the period of adjustment to the new multilateral trading regime in agriculture is extended to 10 years. Also, subsidies accorded to food and agriculture sectors for "development purposes" are exempt from coverage.

Estimates of the effects of the Uruguay Round agreement on agriculture suggest that, other things being equal, the long-term increase of world prices for agricultural commodities will not be more than 2–5 percent in the aggregate and 5–10 percent for some commodities such as wheat, sugar, and dairy products (FAO 1994). Notwithstanding the insignificance of these projections against the background of the steadily declining international prices for primary commodities during the last decade or more, many agricultural and trade policy analysts[1] point to the success of the Uruguay Round negotiations in finally bringing agriculture into greater conformity with the basic principles of the GATT and to the potential of future multilateral trade negotiations for achieving greater liberalization of trade in agriculture. Against this view, however, must be weighed the view of critics who point to the unabated strength of administered arrangements in agriculture left in place by the Uruguay Round agreement.

IMPLICATIONS FOR SUB-SAHARAN COUNTRIES

The countries of Sub-Saharan Africa present an interesting and important group of countries for analysis of the effects of the GATT agreement on agriculture. In the main, the economies of these

[1]See, for example, Josling et al. 1994; Sanderson 1994.

countries are largely dependent on agriculture, with the sector providing not only a high proportion of employment but also of export earnings. Also, many Sub-Saharan African countries frequently face difficulties in meeting domestic demands for staple foods without recourse to international food aid.

The implications of the Uruguay Round agreement on agriculture are considered here for 42 non-fuel-exporting countries in Sub-Saharan Africa; 31 are low-income countries and 11 middle-income countries. The low-income countries are of particular interest. By virtue of their regular need to import cereal grains and other staple foods, they are usually categorized as low-income, food deficit (LIFD) countries. Under the Uruguay Round agreement, the major industrial countries are committed to continue to provide international food aid in order to ensure that no LIFD countries are adversely affected by the multilateral reforms to agriculture.

The Uruguay Round reforms to agriculture should be expected to favorably affect the export prospects of agricultural-exporting countries (through increased market access and higher international prices), and unfavorably affect the import costs of food-deficit countries (through higher world food prices). Thus, the recent reforms are something of a double-edged sword, providing the potential for both economic benefits and costs to developing countries, depending on the nature and extent of each country's trade in agriculture. In this connection, it is notable that more than two-thirds of the LIFD countries in Sub-Saharan Africa are chiefly exporters of agricultural goods.

The quantitative results presented here are based on "consensus" estimates of the effects of the Uruguay Round agreement on world prices of temperate zone and tropical commodities, derived from a recent summary of estimates compiled by the Food and Agriculture Organization of the United Nations (FAO) from multisector, trade-focused economic models (FAO 1994). The consensus estimates are used as inputs to a simple partial equilibrium model of international trade that incorporates parameter values for price elasticities of import demand and export supply and for the extent of quantitative restrictions and other administered protection measures in the countries under study (DeRosa 1992, 1995). Notwithstanding its simplicity, the model allows for the influence of changes in real exchange rates arising from the liberalization of world trade in agriculture as well as other factors impinging on each country's balance of international payments.

The "impact effects" of the Uruguay Round agreement on agriculture, depicting the changes in trade before account is taken of equilibrium changes in exchange rates, are presented in Table 1. They indicate appreciable opportunities for expansion of exports for a number of Sub-Saharan African countries. Indeed, for the entire sample of countries, agricultural exports expand by more than agricultural imports, reflecting the essential fact that Sub-Saharan Africa is an agricultural-exporting region. This is particularly the case for the middle-income countries of the region, whose agricultural exports and imports are estimated to increase by US$223 million (4.5 percent) and $68 million (2.6 percent), respectively. Among the LIFD countries, however, only 10 countries (Benin, Burkina Faso, Chad, Madagascar, Malawi, Mali, Sudan, Tanzania, Togo, and Uganda) are found to have improved trade balances, and for the group as a whole the estimated increase in agricultural imports ($148 million or 4.1 percent) is nearly two times larger than the estimated increase in earnings from agricultural exports ($85 million or 2.1 percent). Finally, in accord with concerns about the impact of the Uruguay Round on low-income food-importing countries, the simulation results indicate that increases in export earnings are insufficient to cover the higher costs of staple food imports (cereal imports) for the majority of the LIFD countries and some middle-income countries, as denoted by the symbols in Table 1.

Beyond a short period, the effects of the Uruguay Round are unsustainable because—particularly for countries whose trade balances are adversely affected—domestic relative prices must adjust to ensure longer-term balance-of-payments equilibrium. In particular, the real exchange rate between traded and nontraded goods must adjust to maintain the balance of international payments, inclusive of long-term capital flows. Where a trade deficit occurs initially, the real exchange rate—measured as the price of nontraded goods in terms of traded goods—must fall (depreciate), and in cases where a trade surplus occurs initially, the real exchange rate must rise (appreciate).

These precepts are observed in the simulation results in Table 2, where it is seen that the real exchange rate, heretofore held constant, adjusts sufficiently to ensure that the simulated changes in trade, including trade in nonagricultural goods, result in no change in each country's overall trade balance. Thus, for six middle-income countries expected to experience initial increases in their net

Table 1—Changes in trade without exchange rate adjustment

Nonfuel-Exporting African Countries	Real Exchange Rate	Exports								Imports								
				Agricultural Goods								Agricultural Goods						
		All Goods		All Agricultural Goods		Food and Live Animals	Beverages and Tobacco	Crude Materials	Fats and Oils	All Goods		All Agricultural Goods		Food and Live Animals		Beverages and Tobacco	Crude Materials	Fats and Oils
														All	Cereals			
	(percent)	(US$ million 1990–92 baseline)																
All countries	0.0	307.8	(0.7)	307.8	(3.4)	221.3	4.8	70.0	11.8	216.5	(0.5)	216.5	(3.5)	201.2	126.0	0.7	4.2	10.4
Low-income countries	0.0	85.2	(0.8)	85.2	(2.1)	28.3	2.1	48.5	6.3	148.2	(0.8)	148.2	(4.1)	138.6	87.4	0.5	1.0	8.1
Benin	0.0	5.2	(1.9)	5.2	(5.0)	0.6	...	4.4	0.2	4.1	(0.6)	4.1	(3.6)	4.0	2.5	0.0	...	0.0
Burkina Faso	0.0	5.1	(1.6)	5.1	(3.6)	0.0	...	5.0	0.0	4.5	(0.8)	4.5	(4.3)	4.4	3.0	0.0	0.0	0.1
Burundi*	0.0	0.2	(0.3)	0.2	(0.3)	0.1	0.0	0.0	...	1.2	(0.5)	1.2	(4.9)	1.1	0.7	0.0	0.0	0.0
Central African Republic*	0.0	0.6	(0.5)	0.6	(1.6)	0.0	0.0	0.6	...	1.3	(0.9)	1.3	(3.1)	1.2	0.7	0.0	0.0	0.0
Chad	0.0	3.7	(1.8)	3.7	(3.1)	0.0	...	3.6	0.0	1.2	(0.3)	1.2	(4.8)	1.2	0.6	0.0	...	0.0
Comoros*	0.0	0.0	(0.2)	0.0	(0.2)	0.0	...	0.0	...	0.9	(1.6)	0.9	(4.6)	0.9	0.5	0.0	...	0.0
Equatorial Guinea*	0.0	0.0	(0.0)	0.0	(0.3)	0.0	...	...	...	0.5	(0.8)	0.5	(3.4)	0.4	0.2	...	...	0.0
Ethiopia*	0.0	1.8	(0.7)	1.8	(0.9)	1.4	...	0.4	...	10.9	(1.6)	10.9	(4.4)	9.9	8.8	0.0	0.1	0.8
Gambia*	0.0	0.6	(1.2)	0.6	(4.6)	0.1	...	0.4	0.1	3.4	(1.6)	3.4	(3.9)	3.2	1.2	0.0	0.0	0.1
Ghana*	0.0	1.1	(0.1)	1.1	(0.3)	0.8	0.0	0.2	0.1	10.0	(0.7)	10.0	(4.9)	9.7	4.1	0.0	0.2	0.1
Guinea*	0.0	0.3	(0.0)	0.3	(1.0)	0.1	...	0.2	0.0	6.2	(0.9)	6.2	(3.9)	5.9	3.5	0.1	...	0.2
Guinea-Bissau*	0.0	0.1	(0.6)	0.1	(0.8)	...	...	0.1	0.0	1.2	(1.5)	1.2	(4.2)	1.1	1.0	0.0	...	0.1
Kenya	0.0	5.0	(0.4)	5.0	(0.8)	3.0	0.0	1.9	0.0	9.2	(0.5)	9.2	(4.5)	7.9	4.2	0.0	0.1	1.2
Lesotho*	0.0	0.9	(1.3)	0.9	(6.4)	0.6	0.0	0.3	...	4.3	(0.7)	4.3	(3.0)	4.2	2.4	0.0	0.0	0.1
Madagascar	0.0	3.7	(1.1)	3.7	(2.3)	3.2	0.0	0.4	0.0	2.7	(0.6)	2.7	(4.2)	2.4	1.9	0.0	0.0	0.3
Malawi	0.0	7.5	(1.7)	7.5	(1.9)	5.3	1.9	0.4	0.0	3.7	(0.5)	3.7	(4.7)	3.5	3.1	0.0	0.0	0.1
Mali	0.0	8.3	(2.3)	8.3	(3.2)	0.3	...	7.7	0.3	5.8	(0.9)	5.8	(4.8)	5.8	2.0	0.0	0.0	0.0
Mauritania*	0.0	0.0	(0.0)	0.0	(0.0)	...	...	0.0	...	6.9	(3.2)	6.9	(4.8)	6.7	2.8	0.0	0.0	0.2
Mozambique*	0.0	2.2	(1.4)	2.2	(5.1)	1.4	...	0.7	0.0	10.1	(1.1)	10.1	(4.5)	9.3	7.5	...	0.1	0.7
Niger*	0.0	0.2	(0.0)	0.2	(0.3)	0.0	0.0	0.1	...	4.4	(0.9)	4.4	(3.7)	4.0	2.1	0.0	0.0	0.3
Rwanda*	0.0	0.2	(0.2)	0.2	(0.3)	0.1	...	0.1	...	2.0	(0.7)	2.0	(4.4)	1.8	0.9	0.0	0.0	0.2
Sao Tomé Principe*	0.0	0.0	(0.1)	0.0	(0.4)	0.0	...	0.0	...	0.2	(0.7)	0.2	(3.5)	0.2	0.1	0.0	0.0	0.0
Senegal	0.0	8.6	(1.2)	8.6	(4.7)	2.3	0.0	1.6	4.6	15.7	(1.2)	15.7	(3.6)	14.5	8.5	0.1	0.1	1.0
Sierra Leone*	0.0	0.1	(0.1)	0.1	(0.5)	0.1	0.0	0.0	0.0	3.7	(2.4)	3.7	(3.7)	3.6	2.7	0.0	0.0	0.1
Somalia*	0.0	0.0	(0.0)	0.0	(0.0)	...	...	0.0	...	4.4	(1.2)	4.4	(5.0)	4.3	3.6	0.0	...	0.2
Sudan	0.0	15.3	(3.2)	15.3	(3.5)	3.0	...	11.6	0.6	10.4	(1.1)	10.4	(4.0)	9.3	7.2	0.0	0.0	1.0
Tanzania	0.0	6.5	(1.6)	6.5	(2.4)	2.0	0.1	4.3	...	4.1	(0.3)	4.1	(4.1)	3.5	2.3	...	0.0	0.6
Togo	0.0	4.2	(1.5)	4.2	(3.9)	1.1	0.0	2.9	0.2	3.4	(0.6)	3.4	(3.1)	3.2	1.8	0.1	0.0	0.1
Uganda	0.0	1.6	(1.0)	1.6	(1.0)	0.7	0.0	0.9	...	1.0	(0.2)	1.0	(3.9)	0.8	0.2	...	...	0.2
Zaire*	0.0	0.5	(0.1)	0.5	(0.6)	0.3	...	0.2	0.0	7.8	(1.0)	7.8	(3.9)	7.5	4.9	0.0	0.1	0.1
Zambia*	0.0	2.0	(0.2)	2.0	(6.3)	1.5	0.0	0.5	0.0	2.9	(0.3)	2.9	(4.2)	2.8	2.6	0.0	0.0	0.1
Middle-income countries	0.0	222.6	(0.7)	222.6	(4.5)	192.9	2.7	21.5	5.5	68.3	(0.2)	68.3	(2.6)	62.5	38.6	0.3	3.2	2.3
Botswana	0.0	5.0	(0.2)	5.0	(5.6)	5.0	...	0.0	...	4.2	(0.2)	4.2	(2.9)	4.0	1.2	0.0	0.0	0.1
Cape Verde*	0.0	...	...	...	...	...	...	...	...	1.5	(1.1)	1.5	(3.1)	1.4	0.6	0.0	0.0	0.1
Côte d'Ivoire	0.0	16.2	(0.6)	16.2	(1.0)	5.7	0.0	6.5	4.0	12.5	(0.6)	12.5	(3.0)	12.2	7.6	0.0	0.1	0.2
Djibouti*	0.0	...	...	...	...	...	...	...	...	2.4	(1.1)	2.4	(2.6)	2.2	1.1	0.0	0.1	0.1
Liberia*	0.0	0.1	(0.0)	0.1	(0.2)	0.0	...	0.0	0.1	2.8	(2.2)	2.8	3.3	2.7	2.2	0.0	0.0	0.1
Mauritius	0.0	66.2	(5.4)	66.2	(17.2)	66.1	0.0	0.1	0.0	6.0	(0.4)	6.0	(2.9)	5.5	2.3	0.0	0.3	0.2
Namibia	0.0	2.6	(0.2)	2.6	(2.1)	2.6	...	...	...	2.9	(0.2)	2.9	2.6	2.7	0.6	...	0.2	...
Seychelles*	0.0	0.0	(0.0)	0.0	(2.2)	0.0	0.0	0.0	...	0.9	(0.5)	0.9	(2.8)	0.8	0.3	0.0	0.0	0.0
South Africa	0.0	79.2	(0.3)	79.2	(4.8)	66.9	0.1	10.8	1.3	26.3	(0.1)	26.3	(2.2)	22.7	17.4	0.2	2.0	1.4
Swaziland	0.0	31.0	(5.5)	31.0	(9.5)	30.3	0.0	0.8	...	2.6	(0.4)	2.6	(2.6)	2.5	1.0	0.0	0.1	0.0
Zimbabwe	0.0	22.2	(1.4)	22.2	(3.2)	16.2	2.5	3.3	0.1	6.3	(0.3)	6.3	(3.5)	5.9	4.4	0.0	0.3	0.1

Source: Simulated effects of the Uruguay Round agreement on agriculture, assuming consensus estimates of changes in world prices of agricultural commodities (DeRosa 1995).
Notes: Asterisks (*) denote countries for which increases in cereal import costs are not matched by equal or greater increases in total export earnings. Values in parentheses are percentage changes.

Table 2—Changes in trade with exchange rate adjustment

Nonfuel-Exporting African Countries	Real Exchange Rate	Exports: All Goods		Exports: Agricultural Goods: All Agricultural Goods		Exports: Agricultural Goods: Food and Live Animals	Exports: Agricultural Goods: Beverages and Tobacco	Exports: Agricultural Goods: Crude Materials	Exports: Agricultural Goods: Fats and Oils	Imports: All Goods		Imports: Agricultural Goods: All Agricultural Goods		Imports: Agricultural Goods: Food and Live Animals: All	Imports: Agricultural Goods: Food and Live Animals: Cereals	Imports: Agricultural Goods: Beverages and Tobacco	Imports: Agricultural Goods: Crude Materials	Imports: Agricultural Goods: Fats and Oils
	(percent)	(US$ million 1990–92 baseline)																
All countries	-0.4	248.8	(0.6)	286.0	(3.2)	206.5	-0.0	66.8	12.3	248.8	(0.5)	216.7	(3.5)	201.3	125.8	0.6	4.4	10.4
Low-income countries	-0.9	130.0	(1.2)	93.2	(2.2)	38.9	0.2	47.1	7.0	130.0	(0.7)	146.2	(4.1)	137.2	86.7	0.3	0.9	7.9
Benin	0.3	4.5	(1.6)	5.0	(4.8)	0.6	...	4.2	0.2	4.5	(0.7)	4.2	(3.6)	4.1	2.5	0.1	...	0.0
Burkina Faso	0.1	4.7	(1.4)	4.9	(3.5)	-0.0	...	4.9	0.0	4.7	(0.8)	4.5	(4.3)	4.4	3.0	0.0	0.0	0.1
Burundi	-0.7	0.8	(1.0)	0.7	(1.0)	0.6	0.0	0.1	...	0.8	(0.3)	1.1	(4.8)	1.1	0.7	-0.0	0.0	0.0
Central African Republic	-0.4	1.2	(0.9)	0.8	(2.0)	0.1	0.0	0.7	0.0	1.2	(0.8)	1.3	(3.1)	1.2	0.7	0.0	0.0	0.0
Chad	0.8	2.0	(1.0)	2.7	(2.3)	-0.3	...	3.0	0.0	2.0	(0.5)	1.2	(4.9)	1.2	0.6	0.0	...	0.0
Comoro	-2.8	0.6	(3.0)	0.5	(3.1)	0.5	...	0.0	...	0.6	(1.1)	0.9	(4.5)	0.9	0.5	-0.0	...	0.0
Equatorial Guinea	-1.0	0.4	(1.0)	0.1	(1.2)	0.1	...	...	...	0.4	(0.6)	0.5	(3.3)	0.4	0.2	-0.0	...	0.0
Ethiopia*	-2.5	7.9	(3.3)	6.7	(3.5)	4.8	0.0	1.9	0.0	7.9	(1.2)	10.5	(4.3)	9.7	8.6	-0.0	0.1	0.7
Gambia	-3.3	2.2	(4.5)	1.0	(7.9)	0.2	...	0.6	0.2	2.2	(1.1)	3.2	(3.7)	3.1	1.1	0.0	0.0	0.1
Ghana	-0.7	7.9	(0.8)	3.5	(1.0)	3.2	0.0	0.2	0.1	7.9	(0.6)	10.0	(4.9)	9.7	4.1	-0.0	0.2	0.1
Guinea	-0.7	5.2	(0.7)	0.4	(1.7)	0.2	...	0.2	0.0	5.2	(0.7)	6.2	(3.8)	5.9	3.4	0.1	...	0.2
Guinea-Bissau*	-3.6	0.6	(4.2)	0.5	(4.4)	0.4	...	0.2	0.0	0.6	(0.8)	1.1	(3.9)	1.1	0.9	-0.0	...	0.1
Kenya	-0.3	8.0	(0.7)	6.7	(1.0)	4.5	0.1	2.1	0.0	8.0	(0.4)	9.1	(4.5)	7.9	4.2	-0.0	0.1	1.2
Lesotho*	-1.7	2.0	(3.0)	1.1	(8.1)	0.7	0.0	0.4	...	2.0	(0.3)	4.1	(2.9)	4.0	2.3	-0.0	0.0	0.1
Madagascar	0.2	3.0	(0.9)	3.3	(2.1)	2.9	0.0	0.4	0.0	3.0	(0.6)	2.7	(4.2)	2.4	1.9	0.0	0.0	0.3
Malawi	0.7	4.7	(1.1)	4.9	(1.2)	4.8	-0.2	0.3	0.0	4.7	(0.7)	3.7	(4.7)	3.5	3.2	0.0	0.0	0.1
Mali	0.5	6.5	(1.8)	7.0	(2.7)	-0.1	...	6.9	0.3	6.5	(1.0)	5.9	(4.9)	5.8	2.0	0.0	0.0	0.0
Mauritani	-1.5	6.5	(1.5)	0.6	(1.5)	0.6	...	0.0	...	6.5	(3.0)	6.8	(4.7)	6.6	2.7	0.0	0.0	0.2
Mozambique*	-2.4	5.8	(3.8)	3.2	(7.4)	2.1	...	1.0	0.1	5.8	(0.7)	9.8	(4.4)	9.1	7.3	-0.0	0.1	0.6
Niger	-0.9	3.4	(1.0)	0.8	(1.2)	0.5	0.1	0.1	...	3.4	(0.7)	4.3	(3.6)	4.0	2.0	0.0	0.0	0.3
Rwanda	-1.2	1.2	(1.4)	1.1	(1.4)	1.0	0.0	0.1	...	1.2	(0.4)	2.0	(4.3)	1.8	0.9	0.0	0.0	0.2
Sao Tomé Principe	-1.0	0.2	(1.1)	0.0	(1.4)	0.0	...	0.0	...	0.2	(0.5)	0.2	(3.4)	0.2	0.1	-0.0	0.0	0.0
Senegal	-0.7	3.8	(1.9)	9.9	(5.4)	2.6	0.0	1.9	5.3	13.8	(1.0)	15.5	(3.6)	14.3	8.5	0.0	0.1	1.0
Sierra Leone	-2.2	3.2	(2.2)	0.5	(2.6)	0.4	0.1	0.0	0.0	3.2	(2.1)	3.5	(3.5)	3.5	2.6	-0.0	0.0	0.1
Somalia*	-2.8	2.4	(2.9)	1.1	(2.9)	1.0	...	0.1	...	2.4	(0.6)	4.3	(4.8)	4.2	3.5	0.0	...	0.2
Sudan	0.7	11.7	(2.4)	12.1	(2.8)	2.0	...	9.5	0.5	11.7	(1.3)	10.5	(4.0)	9.4	7.3	0.0	0.0	1.1
Tanzania	0.3	5.2	(1.3)	5.6	(2.1)	1.6	0.1	4.0	-0.0	5.2	(0.4)	4.1	(4.1)	3.5	2.3	0.0	0.0	0.6
Togo	0.2	3.6	(1.3)	3.9	(3.7)	1.1	-0.0	2.7	0.1	3.6	(0.6)	3.4	(3.1)	3.2	1.8	0.1	0.0	0.1
Uganda	0.2	1.2	(0.7)	1.3	(0.8)	0.4	0.0	0.8	...	1.2	(0.2)	1.0	(4.0)	0.8	0.2	0.0	...	0.2
Zaire	-0.7	6.7	(0.8)	1.3	(1.3)	0.9	...	0.3	0.0	6.7	(0.9)	7.7	(3.9)	7.4	4.8	-0.0	0.1	0.1
Zambia	-0.1	2.8	(0.2)	2.1	(6.3)	1.5	0.0	0.6	0.0	2.8	(0.3)	2.9	(4.2)	2.8	2.6	0.0	0.0	0.1
Middle-income countries	0.1	118.8	(0.4)	192.8	(3.9)	167.6	-0.2	19.7	5.3	118.8	(0.4)	70.4	(2.7)	64.1	39.1	0.4	3.4	2.5
Botswana	0.0	4.5	(0.2)	5.0	(5.6)	5.0	-0.0	0.0	-0.0	4.5	(0.2)	4.2	(2.9)	4.0	1.2	0.0	0.0	0.1
Cape Verde*	-2.4	0.2	(2.4)	0.0	(2.4)	0.0	0.0	0.0	...	0.2	(0.2)	1.2	(2.6)	1.2	0.5	-0.0	0.0	0.1
Côte d'Ivoire	0.1	13.4	(0.5)	14.7	(0.9)	4.4	0.0	6.3	4.0	13.4	(0.6)	12.6	(3.0)	12.3	7.6	0.0	0.1	0.2
Djibouti*	-2.2	0.5	(2.2)	0.2	(2.2)	0.2	...	0.0	...	0.5	(0.2)	1.9	(2.1)	1.9	0.9	-0.1	0.0	0.0
Liberia	-1.1	2.3	(1.2)	0.5	(1.3)	0.1	...	0.0	0.1	2.3	(1.9)	2.5	(3.1)	2.5	2.1	-0.0	0.0	0.1
Mauritius	3.1	28.9	(2.4)	54.5	(14.2)	54.5	-0.0	-0.0	0.0	28.9	(1.8)	7.6	(3.7)	6.6	2.7	0.1	0.5	0.4
Namibia	-0.0	2.8	(0.2)	2.6	(2.2)	2.6	...	0.0	...	2.8	(0.2)	2.9	(2.6)	2.7	0.6	...	0.2	...
Seychelles	-0.6	0.3	(0.7)	0.0	(2.9)	0.0	0.0	0.0	...	0.3	(0.2)	0.8	(2.6)	0.8	0.3	-0.0	0.0	0.0
South Africa	0.2	40.2	(0.2)	76.5	(4.6)	64.9	0.0	10.3	1.2	40.2	(0.2)	26.8	(2.2)	23.0	17.5	0.2	2.1	1.4
Swaziland	3.2	13.2	(2.3)	20.7	(6.3)	20.7	-0.2	0.2	...	13.2	(1.8)	3.3	(3.4)	3.1	1.1	0.1	0.1	0.1
Zimbabwe	0.6	12.5	(0.8)	18.0	(2.6)	15.1	-0.0	2.8	0.1	12.5	(0.6)	6.6	(3.6)	6.1	4.5	0.0	0.3	0.2

Source: Simulated effects of the Uruguay Round agreement on agriculture, assuming consensus estimates of changes in world prices of agricultural commodities (DeRosa 1995).

Notes: Real exchange rate changes for country groups are simple averages. Asterisks (*) denote countries for which increases in cereal import costs are not matched by equal or greater increases in total export earnings. Values in parentheses are percentage changes.

exports of agricultural goods, the real exchange rate appreciates. And, for the middle-income countries as a group, the total increase in imports of all goods rises to $119 million (0.4 percent), from $68 million in Table 1, mainly reflecting an improvement in economic welfare. On the other hand, the total increase in exports for the middle-income countries in Table 2 ($119 million or 0.4 percent) is smaller than in Table 1 ($223 million) because of the number of higher-income countries whose real exchange rate must appreciate.

The circumstances of the low-income countries are less fortunate. In most instances, the real exchange rate falls, and as a result the increase in export earnings of these countries is somewhat higher than before, $130 million (1.2 percent) compared with $85 million in Table 1. The total increase in imports of all goods ($130 million or 0.7 percent), however, is lower than in Table 1 ($148 million), reflecting the necessity of welfare-reducing adjustments to the volume of each country's imports in order to maintain the balance-of-payments equilibrium.

With regard to food import costs, the downward adjustments in exchange rates result in increased export earnings sufficient to finance the higher costs of cereal imports for the majority of the countries identified previously as adversely affected by the Uruguay Round agreement on agriculture. In Table 2, only five low-income countries (Ethiopia, Guinea-Bissau, Lesotho, Mozambique, and Somalia) and two middle-income countries (Cape Verde and Djibouti) are found to be unable to finance their higher costs for cereal imports through increased export earnings. These countries, however, do succeed in financing their higher food costs by reducing their imports of nonagricultural goods as well as increasing their overall exports in response to the lower level of the real exchange rate. In Ethiopia, for instance, the depreciation of the real exchange rate by 2.5 percent causes the total value of nonagricultural imports to decline by $2.6 million, which, in combination with the increase in total exports of $7.9 million, is adequate to cover the increase in the country's cereal import bill of $8.6 million.

THE WAY AHEAD

The future is likely to witness continuation of many of the challenges faced by agriculture in the world economy during the last decade. Indeed, economic and other factors are likely to continue to create pressures for further liberalization of agricultural policies in the major industrial countries and improvement of a wide range of economic policies impinging on agriculture in the less developed countries.

In Sub-Saharan Africa, the challenge of increasing agricultural productivity and food security, through either increased domestic production or greater trade to meet domestic food demands, is mainly one that must be faced by African countries themselves. Further reforms to agricultural policies in the major industrial countries and the resulting alleviation of distortions to world trade in agriculture can provide important new trading opportunities, but the poor export performance of many countries in Sub-Saharan Africa during the last two decades can be traced to lost competitiveness vis-à-vis countries in other developing regions that have adopted more liberal trade regimes (Badiane and Kinteh 1994). Thus, the benefits to countries in Sub-Saharan Africa of global agricultural reforms and liberalization of international trade under GATT and the new World Trade Organization might be matched in many cases by the benefits to these countries of initiating and maintaining reforms to their trade and macroeconomic policies in order to reduce the bias against agriculture attributable to their own policy regimes.

6

Terms of Reference and Output of Working Groups

The Workshop Participants

Following the presentation and discussion of the various papers in the plenary sessions, the participants were organized into three working groups to discuss and make recommendations of significance to African policymakers, development agencies, and industrialized countries. It should be mentioned that, in arriving at their conclusions, the participants took care to ensure that realistic recommendations were formulated. The recommendations reflect the interests of the parties involved, their assessment of the constraints facing them, and their judgment concerning the feasibility and effectiveness of the recommended policy measures.

WORKING GROUP 1: RECOMMENDATIONS FOR DEVELOPING COUNTRIES

The task of this group was to discuss the changes that have taken place in the economies of Sub-Saharan African countries as a result of domestic socioeconomic policies and to formulate recommendations that can contribute to sustainable economic growth and poverty alleviation.

The group outlined priority areas and key measures that African decisionmakers must implement to encourage sustainable agricultural production, overall economic growth, and poverty alleviation in the region.

Agriculture: A Necessary Path

It is important that African decisionmakers recognize the central role of agriculture in socioeconomic development of the region. Overall economic development is not likely to occur without growth in smallholder agriculture.

The State Should Not Disappear

Setting priorities is necessary for better resource utilization and improved economic and social development. The State should not relinquish its role completely, but instead should focus on facilitating the growth of an open and competitive private sector. It should reinforce its own institutional capacity for participative policymaking, and promote formal and informal regional collaboration that stretches across monetary zones.

An Engine of Growth is Needed

An engine of rural growth is needed. It must involve competitive production activities focused on national and international markets. The effects of openness should be beneficial for the majority of both producers and consumers. Agricultural development strategies should involve the majority of small farmers. The performance of the engine of growth depends greatly on the generation and application of agricultural research that reduces unit costs of production, and on policies promoting lower unit costs of distribution for agricultural products. Careful assessment of African experience will permit better identification of agricultural development strategies appropriate to local resource bases.

Population: An Essential Factor of Development

Human capital is an essential factor of socioeconomic development. African decisionmakers should therefore

- put special emphasis on training, education, and raising awareness of the rural population;
- give particular emphasis to peasant agriculture, the farm family, and rural community development;

- initiate programs targeted to women that will increase their productivity and participation in overall economic development;
- accelerate procedures and conditions for the growth of grass-roots organizations; and
- provide health facilities and training, particularly for rural dwellers.

The Three "I"s: Incentives, Infrastructure, and Institutions

For both growth and food security, markets need to work. Therefore, African decisionmakers should

- promote the free flow of goods and services among countries and producer organizations;
- adopt policy measures to improve the profitability of agricultural investments;
- construct a minimum of rural infrastructure, including roads, electricity, and water, that both improves living standards in rural areas and promotes the integration of these areas into the national economy;
- ensure that producer prices of export crops reflect world market prices; and
- ensure that the production of food crops is profitable enough to encourage increase in output, while maintaining incentive policies that are compatible with food security objectives in both rural and urban areas. This has to be considered within the budgetary limitations of African states.

Creating Partnerships

Dialogue among concerned parties is essential:

- National policies for agricultural information are needed.
- Smallholder farmers and their organizations should participate in the formulation of agricultural policy.

Mobilizing Natural Resources for Sustainable Developments

- Agricultural policy should focus on increasing productivity while conserving natural resources to ensure that income generation is sustainable.
- Agricultural research is central to deriving sustainable paths for agricultural development.
- The potential for rural savings should be mobilized and appropriate institutions identified for facilitating the access of smallholders to credit.

WORKING GROUP 2: RECOMMENDATIONS FOR DEVELOPMENT AGENCIES

The task of this group was to propose guiding principles for development agencies in their efforts to help promote sustainable economic development, poverty alleviation, and environmental conservation.

The group succinctly formulated the following guiding principles for increased sustainable agricultural production, rural development, and broad-based economic development.

Africa and African agriculture should remain at the top of the agenda of development agencies. This is necessary in order to reduce poverty, revitalize rural areas, reduce environmental degradation, increase production, and create employment. It is not only necessary to ensure sound policy formulation, but to support sound implementation and appropriate technology development and transfer, and to develop rural infrastructure.

Donors should intervene at various levels and in support of a broad range of actors to promote development of the agriculture sector as needed. Aid agencies need to further open up to the needs of all beneficiary groups, including women, and support their active involvement in the design and implementation of development assistance programs. Nongovernment organizations have an important role to play in linking the activities of governments and donors with grassroots participants. Financial delivery procedures and mechanisms need to be revised to provide closer links with such recipient entities.

Good governance and appropriate policies are essential for successful agricultural development. Donors have an important role to play in fostering good national policy and in supporting the changing agriculture sector policy environment. However, these efforts need to be coordinated among donors and they need to be participatory and transparent without a hidden agenda.

Aid should support the broad process of capacity and institution building, even if this means some sacrifice in achieving specific outcomes.

Long-term consistency must be maintained in development programs, despite cyclical changes in

public opinion at home. Specifically, programs should avoid shifts in priorities to reflect what is fashionable.

Agriculture sector adjustment programs need to be deepened, with emphasis on parastatal reforms, the promotion of privatization, and institutional reforms. Capacity building (training at the local level, research, planning and management) must accompany these programs.

Food aid is valuable when used to prevent starvation under emergency conditions. However, considerable care is needed in using it as a development tool. This is because food aid can undercut local farmers' markets, reducing their incentive to produce, and it can lead to increased dependance on new foods that cannot be grown in recipient countries. It is better to provide grant financial assistance rather than food aid for development purposes. This might also help protect aid levels once the GATT agreement begins to reduce food stocks in industrial countries.

New forms of program (rather than project) aid that support a government's own sector-wide investment and expenditure program, based on a participatory process, need to be explored. Given the experiences of donor "competition" and contradictory advice, there is a compelling case for mobilizing donor funds in support of coherent and integrated sector programs that donors would buy into.

The link between rural infrastructure and agricultural development needs to be underlined, particularly given the high transport costs in Africa that restrict market development. In addition to roads, water supply, electricity, and communications, adequate attention needs to be given to rural health services and rural education, which help build capacities.

Technical assistance to the agriculture sector should be identified whenever possible in the recipient country or elsewhere in the region. The aim should be to make use of local capacities and develop them over time.

Credit is an important input requiring careful attention. Previous experiences with rural financial institutions in Africa have been disappointing. It is time to explore innovative financial institutions that complement and strengthen informal credit markets, that are sustainable, and that promote small farmers' access to credit.

It is fundamental to maintain interest and support for agricultural research, but also to make it more demand-driven and focused on the sustainable intensification of farming systems. It is critical to ensure that sufficient biotechnology research be targeted at Africa's agricultural problems.

WORKING GROUP 3: RECOMMENDATIONS FOR INDUSTRIALIZED COUNTRIES

The task of this group was to examine policies of industrial countries that have both direct and indirect effects on developing countries, and to propose policy measures that the former can implement to promote sustainable agricultural growth, improved intraregional trade, poverty alleviation, and overall economic development in Africa.

While taking into consideration the constraints facing policymakers in industrial countries, the proposals made by the group clearly state how industrial countries can help promote sustainable agricultural growth, improved market access for African exports and trade, as well as increased intraregional trade in Africa. The group also pointed out that increased economic growth in developing countries increases imports from industrial countries.

Peace and Stability

Agricultural production and development requires stability and security. Over the last decade, probably nothing has had a more profound negative effect on food production and availability than the tensions, conflicts, and wars that have spread to so many corners of Africa. When famine and food crises hit Africa, it is too often a result of political and military turmoil: food can neither be produced nor distributed. Thus, democracy-building, conflict prevention, and resolution are of utmost importance for agricultural progress in Africa.

- Developed countries should play a major role in building democratic institutions by helping to promote education for democracy in order to build a responsible civil society, by helping with election logistics and infrastructure, and by monitoring elections.
- The international community must use all diplomatic means such as negotiations, persuasion, and economic pressure to promote peace and stability.
- The international community should improve international legal aid procedures and appropriate legislation in order to facilitate the recovery of illegally acquired funds transferred to bank accounts in their countries.
- Together with major arms-producing countries in the South, the international donor community should introduce legislation that will stop arms exports to countries with on-

going internal or external conflicts, countries with excessive military expenditures, and countries violating basic human rights and repressing democratic rights.

Agricultural and Trade Policies

World production and trade in agriculture have been appreciably distorted by the trade and domestic farm policies of the major industrial countries, resulting in low and often unstable world prices for agricultural and tropical commodities. Although African countries have benefited from these conditions to the extent that they are food-importing countries, most African countries also export agricultural goods and therefore would benefit from the reform of the world agricultural trading environment.

Accordingly, the group endorsed the Uruguay Round agreement on agriculture and recommended ratification and full implementation of the Uruguay Round agreement by the major industrial countries and others that are GATT members. The group, however, noted that the outcome of the Uruguay Round still falls short of the objective of thorough liberalization of world trade in agriculture. In this regard, it recommended that industrial countries pursue further steps to increase the access of African countries to markets in the North in primary commodities, as well as processed products. Over the longer term, direct negotiations should be pursued under the GATT or other auspices between countries in the North and South to exchange greater access to markets for industrial as well as agricultural goods, in line with the doctrine of comparative advantage, with an objective of improving the purchasing power of consumers in both regions. This will contribute positively toward increasing the imports of industrial-country goods by African countries.

Foreign Aid and Debt Burden

International debt is a major constraint on Africa's overall economic and agricultural development. Debt repayment procedures should therefore be made less stringent to reduce the heavy burden of Africa's debt. Industrial countries should not reduce the actual level of foreign aid in general and specifically to Africa. As a matter of policy, such aid should mainly be directed to the agriculture sector.

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