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IMPLEMENTING AGRICULTURAL DEVELOPMENT POLICY IN KENYA†

In the decade following Independence (1964–73), Kenya achieved an agricultural growth rate of 4.6 percent a year, a rate matched by few developing countries. From then until 1982, however, growth slowed to an estimated 3.6 percent a year. Particularly distressing in view of Kenya's rapid population growth rate, which reached 4 percent a year by the end of the decade, was the slowdown in the growth of some key food commodities, particularly milk, beef, pulses, wheat, cassava, and sorghum/millet. Since 1981, agriculture has recovered, showing a robust annual growth rate of more than 4.4 percent a year. The causes of lagging growth and the subsequent recovery are complex. Droughts in many areas of the country contributed to slower growth, while good weather conditions in the last three years have stimulated production. Whether these higher growth rates are sustainable, however, is questionable, given the high population growth rate, shortages of good arable land, and problems in implementing agricultural development policies.

In the mid-1970s, the government of Kenya shifted the focus of its official development strategy from industry to agriculture. In official policy documents, most notably the Fourth Development Plan (1979–83), there was a new emphasis on the need to improve producer incentives, to take an integrated approach to agricultural development, and to increase public investment in the sector. Although the Fourth Development Plan, and the recently issued Fifth Development Plan (1984–88), address the major constraints to agricultural development and present a sound policy framework for stimulating growth, many of these

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† This is a revised version of a paper presented at the African Studies Association annual meetings, December 7–9, 1984. The author is grateful for comments on an earlier draft from Richard H. Goldman, Michael Westlake, and William O. Jones. The views and interpretations expressed in this paper are those of the author and should not be attributed to the World Bank, its affiliated organizanizations, or any individual acting in their behalf.

policies have been only partially implemented. Moreover, many programs and policies necessary to build the basis for intensification of production and growth in the longer term have not been initiated.

This paper examines problems in implementing Kenyan agricultural policy in recent years. Special attention is paid to the problems of translating policy statements into actions, especially in four key policy areas where government intervention is important: the incentive structure, marketing, the public investment program, and research. In each of these areas, government actions have often diverged from stated policies, affecting past and future development patterns. The conclusions that emerge are that policy makers need to look more carefully at the trade-offs between short-term actions and longer-term objectives and that improved strategies and resource allocation systems are needed to translate objectives into action.

AGRICULTURAL GROWTH AND PERFORMANCE

In the 1960s and early 1970s, agricultural development in Kenya achieved remarkable success. Annual growth rates averaged 4.6 percent, fueled by an expansion of cultivated area, a shift to high-value commodities, and a sharp increase in maize yields.[1] The post-Independence period saw a transfer of large farm holdings to small-scale producers; land that was previously fallow or used for grazing was put into crop production. Cropped land expanded by about 20 percent in this period (FAO, 1977). Second, previously restricted activities, notably coffee, tea, and dairy production, were opened to African producers on a larger scale. Coffee and tea production together were responsible for about 30 percent of agricultural growth in this period (World Bank, 1983, p. 330). Finally, the introduction and rapid uptake of hybrid maize in the late 1960s significantly increased production among both commercial and subsistence producers.

In the 1970s, there were notable fluctuations in the year-to-year growth rates of agricultural GDP (see Table 1). Based on official government national accounts statistics, the annual average growth rate for agriculture between 1972 and 1982 was 3.1 percent. Although this is a respectable rate of growth for agriculture, it represents a decline from previous high growth rates and, more importantly, is less than the growth rate of population. Substantial variations in growth caused by external factors occurred in three years: in 1977 the coffee boom helped push growth to 10.2 percent and in 1979 and 1980 droughts resulted in a fall in production. Although it appears that agricultural GDP in the semi-monetary sector was undervalued between 1972 and 1977, and thus growth rates were probably higher than official statistics indicated, small farm performance did lag in that period (World Bank, 1983). Influenced by the accelerating population growth rate in the 1970s, the per capita availability of some key foods (notably wheat, pulses, cassava, and milk) declined up until

[1] These causes are explored in more detail in World Bank (1983).

1980 (see Table 2). Since the drought, agricultural performance has improved; growth of agricultural GDP was 6.2 percent in 1981 and 4.4 percent in 1982. Preliminary estimates indicate that growth will have exceeded 4 percent in 1983 as well. Higher growth rates were brought about by good weather and significant improvements in official producer prices, leading to increases in maize, milk, meat, and tea production.

Table 1—Growth of Agricultural GDP, 1972–82
(constant 1976 prices)

	Agricultural GDP *(K£ million)*	Percent of total GDP	Rate of growth *(percent)*
1972	426.04	37	—
1973	437.38	37	2.7
1974	442.19	36	1.1
1975	458.38	37	3.7
1976	466.15	36	1.7
1977	513.60	37	10.2
1978	533.31	36	3.8
1979	529.05	34	−0.8
1980	522.03	33	−1.3
1981	554.39	33	6.2
1982	578.88	33	4.4

Source: Central Bureau of Statistics, various years. *Economic Survey.*

Table 2—Per Capita Availability of Selected Food Items
(kilograms per year, period average)

	1965–70	1971–75	1976–80
Maize	95.1	97.4	100.1
Wheat	17.0	15.7	13.6
Pulses	25.9	22.6	17.2
Sugar	12.2	15.9	19.1
Fats and oils	4.2	6.4	7.3
Potatoes	19.2	27.0	24.8
Cassava	59.8	53.3	49.9
Sorghum and millet	8.0	6.7	5.6
Milk	74.8	56.0	62.5
Beef	–	12.5	36.5

Source: Kenya, 1983. *Development Plan 1984–88.* Government Printer. Nairobi, Kenya. Per capita availability is net availability taking account of exports, imports, seeds, and losses.

Although growth has been strong in the last three years, this does not necessarily signal a return to the high growth period of the 1960s. While the causes of slowing growth in the 1970s are many and complex, several clear influences can be identified. Droughts in 1979 and 1980 resulted in a drop in agricultural production. Kenya's predominantly rain-fed agriculture is susceptible to the vagaries of weather, and as the experience of 1979 and 1980 shows, droughts in key areas of the country can have important effects on overall growth rates. Another major influence is the exhaustion of the contributions to increased growth made by the factors that stimulated growth in the 1960s. After redistribution of land holdings following Independence and the resulting expansion of cultivated area, little good unexploited agricultural land remains, as Kenya's arable land supplies are less than 20 percent of total land area. Coffee and tea production did continue to contribute heavily to growth between 1975 and 1980, in part due to the worldwide boom in coffee prices in 1977 and in part due to further expansion of tea production. Any future large increases in coffee and tea production, however, are limited by international agreements and domestic controls on planting. Finally, the already fairly widespread use of hybrid maize means that there is limited scope at present for quickly increasing maize yields. About 50 percent of farmers now use hybrid maize seeds, and virtually all commercial farmers do. Technological innovations to significantly increase yields of other major crops are not yet widely available.

A more pervasive set of influences on sectoral growth is rooted in the changing structure of production and the response of institutions and policy makers. The agricultural sector in Kenya faces two important problems: a shortage of arable land and one of the highest population growth rates in the world. Agriculture must meet the challenge of feeding and employing the burgeoning population on very limited supplies of land while still generating foreign exchange and raw materials to support development in other sectors of the economy. Continued agricultural growth will depend critically on the intensification of production, primarily among smallholder producers who are the bulk of Kenya's farming population and who are important contributors to Kenya's food supplies and foreign exchange earnings. Many of Kenya's institutions, policies, and programs in the agricultural sector retain the legacy of the large-farm orientation of the pre-Independence period, despite a stated emphasis in the last two plans on small farms. Intensification of smallholder production requires a reorientation of many institutions and policies to provide the framework of agricultural incentives and services needed to encourage continuous innovation and investment. Key areas requiring adjustment are research, extension, marketing, and public expenditures.

Kenya's ability to implement these policies and to develop the institutions and administrative mechanisms to support intensification, in both the public and the private sectors, will be important to sustaining the growth rates of the last few years. Experience in the last decade suggests that institutional weaknesses have contributed to poor performance in some areas and to problems in implementing programs. In part, this is because little attention has been paid

to critical shortages of financial and administrative resources in designing policies and programs. For example, although shortages of management skills in the country had been recognized for some time, the government embarked upon an ambitious development program under the Fourth Development Plan. A key component of the program was the integration of services to the smallholder sector under the Integrated Agricultural Development Program. Administrative problems throughout the life of the program recently led the government to disaggregate the cornerstone project of this program, the Second Integrated Agricultural Development Project, into separate and discrete projects. Managing a large and complicated rural development program, involving several ministries, parastatals, cooperatives, and other institutions, proved to be beyond existing management capacity. The benefits accruing to the smallholder sector under the project appear to be small, as services (credit, input supply, extension, research, and marketing) were not strengthened. The government has also expanded the roles given to some key agricultural parastatals (such as launching the buying center program under the National Cereals and Produce Board (NCPB) to increase official purchases of maize and provide market outlets for producers) and increased government investments in parastatals and public enterprises. The lack of management resources has had an effect over the long term in both the failure to develop responsive research programs for intensifying smallholder agriculture and increasing food production and in the failure to build up the agricultural services to contribute to the intensification of production in future years.

KENYA'S AGRICULTURAL POLICY

Policies are courses of action adopted by a government. Policy analysis can rely on two sources: official policy statements, such as development plans and other policy documents, and government actions such as price controls and taxation. While policy documents usually present neat encapsulated versions of what a government says it is going to do, another indicator of policy is what a government is actually doing. Policy statements and development plans do provide a framework and a longer-term focus for development policy, but often there is a large gap between them and a government's day-to-day decisions. Yet, unless a government pays close attention to the cumulative effect of short-term actions, long-term objectives are not realized, and actions become in retrospect *de facto* policies. Thus, it is important to look at both intentions and actions in discussing agricultural policy.

The major statement of Kenya's agricultural development policy is contained in the development plans. Development planning was introduced in Kenya in the mid-1960s, with the intention of providing overall guidance for economic development and in particular for the public investment program. Although industrialization was the focus of the early plans, agriculture gained increasing importance in the 1970s. The Fourth Development Plan, covering the period from 1979 to 1983, was unique in the emphasis it placed on poverty

alleviation and thus on agricultural development, as agriculture and agriculture-related activities provide employment for more than 80 percent of the population. The Plan's broad objectives for agricultural development included encouraging overall sector growth, improving the balance of payments by meeting national food needs and expanding exports, increasing employment opportunities, raising rural incomes, and conserving natural resources. The general strategies for development and for overcoming sectoral constraints provided the basis of the Plan's broad policy framework for action, which was supplemented by specific project proposals. To accomplish the proposed development programs, the institutional framework of the sector would be strengthened and an integrated approach to crop development would be used.

The Fourth Plan emphasized smallholder development and the concurrent development of incentives and services to encourage growth in this area. The Plan recommended the improvement of the incentive structure for producers. In the area of marketing, the Plan called for increased competition, reduced government intervention, relaxation of internal restrictions on maize movements, and development of market infrastructure, particularly large- and small-scale storage facilities. Pricing policies would seek to bring domestic agricultural prices more in line with world prices. The annual price review would pay more attention to world prices and trends, parity pricing, economic analysis, and price interrelationships. Services to the sector would be expanded; these include research, agricultural education, extension, livestock services, and agricultural credit. Research would concentrate on encouraging intensive land use, development of arid and semi-arid lands, smallholder production technology, labor-intensive production methods, and export promotion. Land policy would be the responsibility of a new National Lands Commission, which would consider such issues as tenure, subdivision, and land use and serve as a focus for coordinating and improving land policies. The Plan was especially concerned with a central theme—expansion of employment opportunities. There was clear recognition that the agricultural sector must continue to expand employment opportunities. This would be achieved through an emphasis on the development of labor-intensive crops (especially coffee, tea, pyrethrum, and sugarcane) as well as through yield increases, subdivision of large farms, and new settlements.

In 1980, as recommended under the Fourth Plan, a National Food Policy was drafted. Shortages of maize and other basic food commodities after the droughts in 1979 and 1980 led to new concern over domestic food supplies. The overall objectives of food policy, as outlined in the paper, included (1) maintaining a position of broad self-sufficiency in primary food commodities to avoid using scarce foreign exchange for food imports; (2) achieving a calculated degree of food supply security for each region of the country; and (3) ensuring that food distribution provides every member of the population with a nutritionally adequate diet. The programs to achieve these objectives echo the Fourth Plan: giving priority to public investment in agriculture, and especially to subsistence food crops; improving the efficiency of production, marketing, and distribution;

developing a well-defined land policy; and increasing national storage capacity, including the establishment of a national strategic grain reserve of four million 90-kilogram bags (360,000 tons) of basic grains.

The Fifth Development Plan (1984-88), which was issued in late 1983, continues the thrust of the Fourth Plan and the Food Policy Paper, with two notable exceptions. First, a greater part of the Fifth Plan is devoted to an analysis of financial constraints and recognition that since public resources will be curtailed over the Plan period, development programs must be commensurate with available resources. This differs from the ambitious scope of the Fourth Plan, which was written around the coffee boom when Kenya was flush with funds. Second, within the agricultural sector less emphasis is placed on the integrated approach to rural development, in recognition of the unsuccessful experience of coordinating institutions under the Integrated Agricultural Development Program. Instead, the Fifth Plan focuses on incentives and development of services, with a small-farm orientation. Special attention in designing policies and programs will be paid to intensification of production, technology improvement (through research and extension), market incentives, services for arid and semi-arid lands, and institutional reforms and higher standards of management. The target growth rate is 4.5 percent.

The policy framework outlined in these documents is sound and provides a framework that is more than adequate to encourage agricultural development. In the Fifth Plan and the Food Policy Paper, the government appears to have recognized several lessons emerging from performance in the last decade: the importance of price incentives, the failure of the integrated approach, and the need to focus on intensification of smallholder production. Whether these statements will be translated into effective action in the coming years remains to be seen. In the Fourth Plan period, many policies were realized only partially if at all. There are many reasons for this, including political interests to pursue divergent policies, lack of clear analysis of the costs and benefits of current policies, and a shortage of managerial and financial resources to implement ambitious and complex programs. Divergence between planned and actual policies under the Fourth Plan has been especially noticeable in four key areas of government involvement: prices, markets, public expenditure, and research.

THE INCENTIVE STRUCTURE

One of the critical ways in which the government affects decision making in the agricultural sector is through official pricing policies and concomitant control of marketing channels. The level of government intervention in pricing and marketing in Kenya is high, even in comparison with some of East Africa's more avowedly socialist nations, perhaps because control of pricing and marketing is more effective in Kenya than in these countries. Providing attractive price incentives is a key part of most government policy statements, but in practice, price controls have sometimes proved a disincentive.

Government price controls have had the greatest impact on food commodities, as these are among the most regulated. The government sets official producer prices for a range of domestically consumed agricultural commodities; the major ones are maize, wheat, sugar, milk, beef, and cotton. Prices for the two main export crops, coffee and tea, are not set by the government, but are based on world prices adjusted for quality and marketing costs. Since the mid-1970s, the government has used import and export parity prices as a basis for setting official prices. The overall price policy is to attempt to keep prices at world or domestic equilibrium levels, with large margins to cover parastatal marketing costs. Producer costs and consumer prices are also taken into account, although not systematically. Since final price decisions are made by the Cabinet, political considerations also enter the decision.

In general, government objectives for controlling pricing have centered more on welfare than on revenue-producing considerations. Unlike several other African countries, Kenya does not heavily tax the major export crops to generate government revenues (although there is a progressive tax on coffee and tea). Official producer price policies are perceived to be a major tool to ensure higher incomes and stable prices, while consumer price policies have sought constraint of consumer prices. For some commodities, consumer prices have included subsidies (rice and meat), while for others, notably maize, indirect subsidies have been provided through government financing of parastatal marketing margins.

The extent to which current policies have been successful in meeting objectives of higher incomes and price stability has been mixed. The ability of officially controlled prices and market outlets to stabilize prices has depended on many factors, including the structure of production, variability of supply, importance of the crop, and existence of alternative marketing channels. Thus, experience for each crop has varied. For wheat, which is grown almost exclusively by large- and medium-scale commercial farmers,[2] there is no market outside the National Cereals and Produce Board (NCPB), and prices probably have been stabilized. Price stabilization has not always been sustained for maize, however, particularly for smallholder producers. Smallholders do not always have access to NCPB buyers and thus do not always benefit from controlled prices, nor are they as likely to feel compelled to sell to the marketing board and thus suffer from low official prices. When producers are limited to one marketing channel, as is essentially the case with sugar and cotton, low official prices may actually discourage production. Official prices for sugarcane were increased substantially in 1977, then frozen between 1977 and 1981, a period of rapid inflation in Kenya (consumer prices rose more than 50 percent in these four years). As producers could only sell at the official price through official channels, many switched to alternative activities or neglected their stands. Cotton sales fell between 1978 and 1982, and growth of sugarcane production slowed (Table 3) in 1981 and 1982.

[2] In Kenya, large-scale farmers are considered those farming more than 50 hectares, medium-scale farmers 20 to 50 hectares, and smallholders less than 20 hectares.

Table 3—Recorded Production of Selected Agricultural Commodities[a]

	1972	1975	1978	1982	1972–75	1975–78	1978–82	1972–82
	Volume *(thousand tons)*				Average annual growth rate *(percent)*			
Maize[a]	373.0	487.5	236.3	571.3	9.3	−21.4	19.3	4.4
Wheat[b]	164.4	145.5	165.0	234.8	−1.2	3.0	9.2	3.6
Sugarcane	1,451.2	1,654.6	2,349.2	3,107.7	5.1	12.6	7.2	7.9
Cotton[c]	14.0	16.1	27.2	24.4	3.5	17.4	−2.8	5.7
Coffee	58.3	66.2	84.3	88.4	3.7	9.6	1.2	4.2
Tea	41.1	56.7	93.4	95.6	9.5	20.1	0.6	8.8
Beef[d]	26.9	16.6	8.9	9.8	−17.15	−23.1	2.5	−10.6
Dairy[e]	268.4	230.6	269.8	260.3	−5.2	5.4	−0.9	−0.3
	Value *(1976 K£ million)*				Annual average growth rate *(percent)*			
Maize	14.3	18.7	9.0	18.1	9.4	−27.6	19.1	2.4
Wheat	9.9	9.5	10.5	13.0	−1.4	3.4	5.5	2.8
Sugarcane	6.3	9.6	13.7	17.3	15.1	12.6	6.0	10.6
Cotton	1.8	1.7	2.8	3.3	−1.9	18.1	4.2	6.2
Coffee	78.3	83.5	106.4	72.3	2.2	8.4	−10.1	−0.8
Tea	28.2	29.7	49.3	54.8	1.4	18.4	2.7	6.9
Beef	25.9	20.1	27.3	30.7	−8.8	10.7	3.0	1.7
Dairy	17.8	16.0	15.0	16.7	−3.6	−2.2	2.7	−0.6

Source: Kenya, various years. *Statistical Abstracts* and *Economic Surveys.*

[a] Maize, beef, and dairy products are sold through marketing boards and local traders; estimates exist only for total production. These figures represent recorded sales to marketing boards only. Production statistics are more accurate for other commodities.

[b] Sales to the National Cereals and Produce Board (NCPB).

[c] Sales to the Cotton Lint and Seed Marketing Board.

[d] Sales to the Kenya Meat Commission.

[e] Sales to the Kenya Cooperative Creameries, in million liters whole milk equivalent.

Official producer prices for food commodities have tended to lag behind other prices in the economy, especially in the latter half of the 1970s. Official prices for maize, the most important food and smallholder crop, did not rise as rapidly as the consumer price index, the input price index, or the price index of purchased goods in rural areas in the period 1976 to 1982 (Table 4). Sharp increases in maize prices in 1982 and 1983 brought them more in line with other prices in the economy. Wheat, milk, and sugarcane prices have also lagged in certain years. While there is not always a correlation between official producer prices and growth in production of these commodities because of other factors such as weather, there appears to be a relationship. Maize sales to the NCPB fell in the late 1970s due to low official prices. Official prices were lowered in 1978, and sales to the NCPB dropped sharply. Not only did total sales to NCPB fall between 1975 and 1980, but also sales as a percentage of total estimated production fell from 33 percent in 1975 to 12 percent in 1978, declining to a low of 8 percent in 1980 during the drought. Officially marketed milk and beef also declined. Although drought did affect production in 1979 and 1980, it does not account for the total decline. While the estimated volume of production of food commodities showed lower growth between 1972 and 1981, growth in volume of production of export and industrial crops was stronger.

Taxation has to date played a fairly minor role in agricultural policy in Kenya. With two notable exceptions, taxation of agricultural production is not a major source of revenues for the government of Kenya, and most agricultural crops are not heavily taxed. The exceptions are coffee and sugar. A progressive export tax on coffee was initiated during the coffee boom period to capture a share of the windfall profits. A levy from the Coffee Board and the county council cess account for about 4 percent of the value of the crop. The most heavily taxed agricultural commodity is sugar. Total direct and indirect taxes on sugar production represent about 4 percent of total government receipts from taxation (KSh 14,000 million in 1981/82). In 1981, taxation of the sugar industry totaled 37 percent of the industry's sales at the factory gate; the comparable figure for coffee was 11.5 percent and for tea 0.6 percent of sales revenues. It is interesting that sugar, which is only consumed locally, is taxed so heavily, while exports of high-value beverage crops are not. In fact, local consumption of tea is subsidized by the tea industry, which is required to sell a variable percentage of production (10 to 15 percent) to the Kenya Tea Packers Association (KETEPA), the local marketing company, for domestic sales.

What factors influenced pricing decisions in the period between 1976 and 1982? In the case of food commodities, especially milk and maize, one major influence was the government's desire to restrain domestic food prices in urban areas. Aside from some items such as sugar, which are not produced throughout the country, most rural consumers depend on their own production or local markets to supply basic foodstuffs, and thus consumer price controls have little meaning for them.[3] Any system of price controls thus primarily benefits the

[3] It might be argued that official prices could affect local market price levels by

Table 4 - Movements in Official Price Indexes of Major Agricultural Commodities *(1976=100)*

	1970	1972	1974	1976	1978	1980	1982	1983
Official producer prices of food commodities								
Maize	36	51	60	100	116	123	139	229
Wheat	37	42	67	100	111	137	157	208
Milk	50	73	73	100	126	139	205	238
Cash crops								
Seed cotton	47	55	74	100	151	163	168	206
Sugarcane	43	48	59	100	127	127	162	216
Coffee	30	31	40	100	112	104	110	99
Tea	64	59	68	100	150	151	184	167
Pyrethrum	63	80	87	100	146	244	234	234
Consumer price index[a]	*n.a.*	50	73	100	126	159	189	217
Input price index	*n.a.*	*n.a.*	98	100	119	138	153	182
Price index of purchased goods, rural areas	*n.a.*	*n.a.*	97	100	117	147	170	206

Source: Kenya, various years. *Economic Surveys.*

[a] Average of upper, middle, and lower income consumer price indexes for Nairobi, excluding rent, plus CPIs for Mombasa, Kisumu, and Nakuru (which do not include rent) for the period 1975–82.

urban populations, which tend to have greater representation in the political system. During the latter half of the 1970s and the early 1980s, the inflation rate was high in Kenya; control of the prices of basic food commodities (as well as other basic goods) was seen as a way to restrain inflation and protect the urban workers. Even when producer incentives were sharply increased, as in 1982 and 1983, several commodities are still subsidized indirectly. The government has not always passed on the full costs of some marketing parastatals. The resulting losses by the parastatals have been rationalized as resulting from inefficient management. Although clearly many parastatals are inefficient, they are also incurring losses because of official pricing policies or government programs (such as the school milk program under the Kenya Cooperative Creameries). The government has recognized this in the case of NCPB and is writing off past

offering alternative outlets. This does not appear to be the case in Kenya, possibly because official marketing agencies are not well represented throughout producing areas.

deficits, in effect having the taxpayers subsidize high-cost parastatal operations.

Political representation the ability of producers to organize themselves as an interest group and bring pressure on decision making is also a factor in pricing policies. Urban groups have always tended to be easier to organize, more visible, and more vocal; rural smallholder producers, on the other hand, are usually dispersed and have no effective spokesman or interest group. In Kenya, this pattern is clear in the case of smallholder commercial food producers; export and industrial crop producers, however, have been more able to influence policy. Unlike most other African countries, Kenya has resisted the urge to tax the export crop sector heavily, despite the fact that export crop production tends to have much higher returns than most other productive activities. The reason for this lies both in the colonial influence (in the colonial period, export crops were not heavily taxed, a policy that has been retained), and in who produces export crops. Coffee and tea producers tend to be among the rural elites. They have been active in rural politics and are well represented in government; indeed, many government officials have farms, and many grow coffee and tea.[4] On the other hand, sugar is one of the most heavily taxed commodities. Sugar production is located in Western Kenya. The government has been eager to develop sugarcane in order to give this area a remunerative cash crop, as the western part of the country has in the past been relatively neglected in terms of development programs. The sugar producers have received subsidies (through subsidized mechanized services furnished by the sugar estates and low-interest loans), while the sugar factories, which are owned by the government, have borne the brunt of taxation policies.[5]

Not only have official producer prices sometimes not provided adequate incentives; in some cases they have proved to be a disincentive. When marketing channels have been controlled by the government and producers have perceived prices to be too low, they have shifted into the production of more financially attractive commodities. This was noticeable in the case of sugarcane. As sugarcane prices deteriorated relative to other prices in 1980 and 1981, sugarcane producers shifted into maize and milk production, or simply neglected their fields (inadequate marketing arrangements and credit availability also contributed to declines). The failure of NCPB to support official prices in 1978 and the subsequent reduction in the official price led to a decline in maize production the following year, especially among commercial producers.

Official prices thus have not necessarily stabilized production *or* incomes

[4] Lamb and Muller (1982), in their study of the Kenya Tea Development Authority (KTDA), point out that the political status and organization of the tea producers was an important factor in the success of KTDA.

[5] The excise tax nominally falls on the consumers. To keep consumer prices low, however, the government has set factory margins at levels insufficient to recover costs. The difference between the processing costs and the consumer price is collected as an excise tax. The sugar companies, most of which are owned by the government, are running into financial difficulties and eventually will need subsidies to survive.

yet policy makers believe they are a cornerstone of any agricultural policy. Policy makers view official prices as essential to prevent exploitation of producers and to ensure stable returns—even though producers may be better off with fluctuating prices.[6] This reliance on fixed producer prices stems in large part from the colonial period. Price controls were first introduced in the 1930s to benefit European settlers and to protect them from low international prices. After Independence, these price control systems were retained in virtually the same form, despite the fact that the structure of the agricultural sector changed radically with the increase in commercially oriented smallholder producers. Most policy makers are familiar with a system of price controls and find it difficult to imagine the agricultural economy functioning smoothly without them. Although evidence often indicates that controls do not benefit all producers, especially smallholders,[7] many policy makers have not been convinced. Farmers have not necessarily insisted on these policies, either; a survey of cotton farmers undertaken under the First Integrated Agricultural Development Project in South Nyanza indicated that many farmers would welcome back the private traders because of severe problems and late payments by the cooperatives and the Cotton Lint and Seed Marketing Board, which hold the monopoly for cotton marketing. Price controls also give the government a sense of control over the economy and are a visible sign that the government is acting to improve everyone's situation, producer and consumer alike. Although these policies may sometimes do more harm than good, the interventionist role of the government as guarantor of adequate returns to producers is often extremely important, perhaps more so politically than for its benefits to the economy.

MARKETING

Control of marketing channels is an important complement to official price policies. Nearly every major agricultural commodity (including export crops) in Kenya is handled by a marketing or regulatory board or agency; most of these have been granted the official monopoly by the government. The effectiveness of the marketing agencies differs widely and depends both on the crop being handled (food commodities tend to have parallel marketing channels while monopolies on cash crops are easier to enforce) and on the performance of the boards themselves. Several marketing boards have been singled out by the

[6] Research by John Mellor (1975) shows that producers tend to maximize incomes through fluctuating prices rather than price stabilization methods.

[7] Several studies of maize marketing and pricing, for example, have clearly shown that the objectives of government control have often not been met—that prices have not been stabilized or remunerative markets assured—and in fact have harmed the smallholder producers in particular, the major target group of these policies. See, for example, Schmidt (1979); Aldington (1979); Bale and Lutz (1979); Gsaenger and Schmidt (1977); Hesselmark (1977): Hesselmark and Lorenzl (1976); and Heyer, Maitha, and Senga (1976).

government as among the worst parastatals; these include the Kenya Cooperative Creameries (milk), the Kenya Meat Commission (beef), and the NCPB (Kenya, 1979). On the other hand, the Kenya Tea Development Authority is widely acknowledged to be a model for agricultural parastatals, and its performance has been good (although it has been less effective at stimulating higher yields among smallholder producers).

Marketing controls for food commodities have tended to be the most problematic, both because alternative channels exist for marketing food commodities and because government policies have affected operations. For example, maize, the most important foodstuff, is marketed through both official channels and a parallel marketing system. NCPB is often a less attractive market outlet for smallholder producers for several reasons: the lack of adequate NCPB outlets or agents in some areas; difficulties in conducting transactions with NCPB, particularly the alleged high incidence of bribery; and failure of NCPB to accept maize and to issue prompt payments during certain glut periods. The parallel marketing system is semilegal; that is, producers are allowed to sell small amounts of maize within their districts, but interdistrict movements of more than two 90-kilogram bags of maize are banned. Nevertheless, there is a flourishing interdistrict trade in maize, which has been important in balancing supply and demand between surplus and deficit regions. Maize movement controls to restrict this trade in an effort to direct surplus production into official channels have had negative effects on rural producers and consumers by disrupting maize flows between regions, introducing instability, and widening the difference between producer and consumer prices.

Government objectives for control of marketing are based on welfare considerations, namely: provision of secure outlets for sales and supply; food supply stabilization for both deficit and surplus areas; maintenance of strategic reserves for basic grains; and prevention of the exploitation of producers by traders. As in the case of price policy, the success of meeting these objectives has been mixed. Weaknesses of key marketing parastatals, notably NCPB and the Cotton Board, have decreased the security these boards offer. During the maize glut of 1977/78, NCPB had to suspend buying operations, with the result that many commercial farmers were forced to sell maize on local markets; the resulting flood of supplies destabilized prices in these markets. Bumper maize crops in 1982 and 1983 also filled NCPB's stores, while financial constraints within both the government and NCPB itself led to problems in financing 1983 purchases, with the result that payments to producers were months behind (the situation has now improved). Both the Cotton Lint and Seed Marketing Board and the Pyrethrum Board have been a focus of farmer complaints for years concerning late payments and excessive marketing costs and deductions. It is thus questionable whether the benefits of a secure outlet are not outweighed by the costs of inefficient institutions and monopoly marketing arrangements. Nor does the NCPB have the technical, managerial, or physical capacity to ensure stable supplies throughout the country. NCPB was poorly equipped to handle maize shortages during the droughts of 1979 and 1980. NCPB focuses

largely on buying maize in surplus areas and supplying millers in urban areas, and it is poorly represented in the deficit rural areas. The role of NCPB in maintaining strategic reserves of maize and wheat has only emerged in recent years. Although NCPB has been allocated the responsibility of maintaining the government's reserve grain stocks, the role of a food-stabilizing organization is quite different from that of a purchasing agency, and NCPB has little experience in this area. Finally, the extent to which government policies have prevented exploitation of the population by unscrupulous traders is debatable; in many instances, the costs of government monopolies, marketing and price controls (borne by both the public sector, which must often subsidize these policies, and by the producers), and inefficient institutions has replaced exploitation by traders.

As in the case of price policies, there are many reasons why market control policies continue to appeal to agricultural policy makers. In Kenya, marketing boards were introduced under the colonial administration to serve European farmers. After Independence, these boards continued (and new ones were established), in spite of the fact that the structure of the farming community shifted from large-scale farmers (with an African farming sector largely untouched by these policies) to one predominantly characterized by small-scale producers, with some large and medium producers still important in commercial production. The roles and policies of most marketing boards, particularly the NCPB, have not been reoriented towards small-scale producers. Decision makers accept the organization of marketing around these monopolies in part because their experience with other systems has been limited. Although there is an active local trade in food commodities, most officials believe that the private sector has inadequate experience and resources to expand this trade nationally.[8]

A second explanation for government reliance on marketing boards is the perception that government intervention is necessary to guarantee producer benefits, and most importantly (although this is rarely voiced) to prevent the concentration of essential food trade in the hands of Asian traders. Government intervention thus is perceived as necessary to protect both the producer and the consumer, in spite of the evidence that small-scale producers and consumers have not benefited from government control of maize markets and that taxpayers have subsidized high-cost parastatals. Moreover, the role of the government as the arbitrator and guarantor of benefits is important. As in many countries, there is the expectation that the government can and should step in to guarantee certain benefits to the population. In the economy, the government is more than referee; it is an essential actor whose active intervention almost automatically assures (it is believed) that things will be rectified. This activist role of the government in the economy has emerged from the govern-

[8] Research by Jones (1972) and Schmidt (1979) among others has shown that there has been an active private-sector trade in agricultural commodities, dating from the early colonial period.

ment's role in the development process and its high visibility, especially in the area of public expenditure and projects. The result of this attitude is that when the economy is functioning poorly, the policy response tends to be one of active intervention, to "set things right," rather than exploration of other less visible options including relying on the interplay of market forces and producer and consumer decision making. This is reinforced by the strong political necessity of the government's being seen to take action in the event of a crisis, such as food shortages or bumper crops. Government response in these situations must be direct and visible—such as setting up buying centers or clamping down on maize movements—to satisfy the population that the situation is under control.

Market controls and reserve stocks are visible and easily understood policies. In the case of food reserves, although it may be more efficient and less costly to the Treasury (as well as guaranteeing a higher degree of food security) to use a fluctuating stock policy, the emotional and political appeal of actually having three months worth of grain supplies sitting in key urban areas is difficult to counter. Similarly with market controls: if NCPB's purchases are inadequate to supply its needs, the visible and direct action is to restrict maize trade to channel more grain into the official system.

Inadequate market policies, particularly the emphasis on fairly straightforward control measures rather than more flexible purchase and price support policies, also stem from policy makers' recognition that the marketing boards have limited managerial and technical capacity, which makes it difficult to implement the more sophisticated policies. Yet the alternative—reliance on policies of direct control—is also administratively demanding, requiring a large number of officials to enforce the monopolies, carry out road checks, handle the paperwork of licensing, and so on. More flexible policies, although more sophisticated, would cut down on the administrative resources—and the money—the government has to devote to enforcing restrictive policies.

PUBLIC EXPENDITURE

Public expenditure, as reflected in the annual and forward budgets, is an important instrument in implementing stated policies. The extent to which programs, policies, and projects are implemented and become an integral part of government activities in the agricultural sector depends on the resource allocation system. In addition, the meaning of the general sectoral commitments made by a government is dependent on the control and use of resources. Thus, examination of the level and patterns of resource allocation reveals a great deal about the degree to which public policy statements are being implemented and about where government priorities lie.

Although both the Fourth Development Plan and the National Food Policy Paper put increased emphasis on public investments in the agricultural sector, the actual share of government development expenditures devoted to agricul-

ture has remained virtually the same since fiscal year 1979[9] and has fallen from previous years. In fiscal 1975, agriculture received 22.1 percent of the development budget; by fiscal 1982, its share had fallen to 17.6 percent (Table 5). In the same period, however, the share of resources to administration had increased from 8.5 to 18.5 percent, defense from 1.5 to 3.1 percent, and industry from 1.4 to 8.6 percent. Agriculture's share of the recurrent budget has dropped from about 6 to about 4.2 percent. The development and recurrent budget allocations for agriculture and livestock programs increased in real terms only by about 70 percent between fiscal 1976 and fiscal 1983, while the total government budget more than doubled.

Table 5—Allocation of Resources to Agriculture[a]

	Development budget		Recurrent budget	
Fiscal year[b]	Amount *(K£ million)*	Percent of total	Amount *(K£ million)*	Percent of total
1974/75	20.4	22.1	13.6	6.5
1975/76	21.5	17.3	20.5	8.3
1976/77	24.0	19.4	19.1	6.7
1977/78	32.7	17.4	22.3	5.5
1978/79	39.7	18.0	25.1	5.3
1979/80	33.1	15.0	27.5	5.0
1980/81	57.5	21.2	51.4	7.4
1981/82	57.6	17.6	38.6	4.9
1982/83	65.2	18.3	44.8	4.7

Source: Kenya. *Development Estimates 1982/83* and *Economic Survey 1982.*
[a]Includes expenditures for agriculture, livestock, forestries, and fisheries.
[b]July 1 through June 30.

Part of the problem of ensuring adequate allocations to the agricultural ministries arises less from Treasury's decision to decrease agriculture's shares than from the failure of the ministries to spend the resources allocated to them. The Ministry of Agriculture's expenditures between fiscal years 1978 and 1980 ran only 65 to 75 percent of their budget estimates, while in fiscal 1981, expenditures were only 56 percent of estimates. In spite of this failure to spend allocations, the Treasury increased the Ministry's budget between fiscal 1978 and 1979 by 24 percent, although this meant that the 1979 budget represented an 83 percent increase over actual expenditures. In succeeding years, Treasury held the agriculture development budget constant in nominal terms, although the Ministry continued to underspend. Underspending stemmed from the lack

[9] The fiscal year of the government of Kenya is July 1 to June 30.

of adequate control over the resource allocation and expenditure process, representing inadequate planning, budgeting, management, and project information within the Ministry. Since 1981, the Ministry has begun to tackle these problems, initially through a multiministerial budget task force to examine the key issues and propose solutions, and subsequently, with the help of advisers under the Technical Assistance Pool, to amend budgeting systems, to improve the resource allocation process (with the assistance of microprocessors), and to monitor expenditures more closely. The result has been that the Ministry of Agriculture has actually received more money than allocated initially by Treasury in the annual budget process.

The Ministry of Agriculture's improved performance in the area of budgeting has allowed it to maintain and even slightly increase its overall budget allocations from the Treasury. However, the current fiscal crisis, which is projected to continue for the next few years, means that the total public investment program will continue to be curtailed. Agriculture's share of the total development budget has been decreasing. Increases in other areas—administration, defense, and industry—have meant that the budget pie has had to be reapportioned. Agriculture has been a primary candidate, not only because of poor spending records in the past, but also because many agricultural projects and programs have not performed well. Large-scale investments in infrastructure, communications, and transport not only spend money more quickly but are also more visible. This is not to suggest that agricultural growth can be achieved simply by throwing more money at the sector; current problems indicate that constraints are related to poor macroeconomic and sector policies as much as (or more than) to lack of finance. On the other hand, development will depend on the expansion of key agricultural services traditionally provided by the public sector, such as extension and research, as well as on targeting more expenditures for smallholders as opposed to parastatals.

The pattern of allocations within the agricultural sector also reveals a difference between policy statements and action. Despite an emphasis on smallholder programs in official policy statements, a large percentage of the agriculture budget has gone to parastatals with only limited benefit to most smallholders. Between fiscal 1979 and 1982, parastatal investments made up more than half of the Ministry of Agriculture's budget, with most funds (40 percent) allocated to two sets of projects: irrigation (through the National Irrigation Board) and sugar development, including factory construction and rehabilitation. Although investments in the National Irrigation Board do benefit smallholders, the number of beneficiaries is small and the cost high compared to projects under the Integrated Agricultural Development Program (IADP) and support for the Ministry's services such as extension, training, and research. Investments in sugar production benefit smallholders to a lesser degree, as they are mainly in estates and factories. Allocations for IADP projects have fallen from 16 percent of the development budget in 1981 to 11 percent in 1983. Kenya's current fiscal crisis has meant severe cutbacks in the public investment program; however, the pattern of resource allocation among activities has remained essentially the

same. The limited and falling share of investments for smallholder programs is indeed worrying. Certainly many of these programs, notably the Integrated Agricultural Development Project, have run into severe problems with the result that budget allocations have had to be cut. The continued allocation of a major share of the Ministry of Agriculture's budget to parastatal projects is, however, a legacy that will continue for a number of years. Several of these project commitments were entered into during the coffee boom years, when the government had more funds. Reducing these investments in some cases would result in unviable projects that would turn out to be a drain on the government in future years. Political and donor pressures have also been brought to bear on the decision-making process. Sugar development, for instance, is seen as politically important to balance regional development and to provide a lucrative cash crop for the western area of the country.

Weaknesses in the budgeting system and lack of links between the Plan (or other policy statements) and the resource allocation process have contributed to the pattern of government expenditures. Although Kenya's budget system is sound in theory, in practice there are problems. The Ministry of Agriculture's budget is essentially prepared by the financial officers, who have little or no operational experience. Although they request budget submissions from the field and from project directors, these are often unrealistically high. Under time and manpower constraints, the main budget officer, the Principal Finance and Establishment Officer (PFEO), is usually left with the task of putting together the budget. Lacking information on project benefits, rates of return, and performance, the PFEO tends to make budget cuts across the board. Few if any efforts are made to link the process with the goals of the Development Plan or Forward Budget; thus the PFEO does not know Plan priorities.

In the process of responding to competing interests in the budget cycle, actual priorities emerge, which may not necessarily be those of the Plan. The budget thus becomes a reflection of current priorities. To harness this process, Caiden and Wildavsky (1980) suggest that the budget process should replace the plan as the medium for defining objectives and setting priorities for government actions. Recent efforts to identify priorities and to include a policy statement with the budget process have improved this somewhat. The Ministry of Agriculture has also strengthened its budget defense with the Treasury, which can also make cuts at the last minute. Unless operational ministries can defend their budgets, Treasury budget officials, faced with the problem of reconciling ministerial budgets with budget ceilings, often make across-the-board cuts in certain categories. Transport expenditure is a favorite, as it tends to be the most abused category of expenditure; in field-oriented ministries such as the Ministry of Agriculture, however, this can have disastrous results on the delivery of services and extension activities.

Despite improvements in the budget process, the Ministry of Agriculture will not gain full control of the resource allocation system until it rationalizes its public investment program. There are too many projects and not enough resources to fund commitments. Choices must be made among activities, projects

must be eliminated, and the system of accepting new projects and funding existing activities must be more tightly controlled. The recent launching of a project management system in the Ministry will contribute to this effort. Difficult political decisions on reducing activities and reallocating resources will need to be made, however, and the result will be revealing of the government's ability to implement its policies.

RESEARCH

Agricultural research in Kenya has had a significant impact on agricultural development, particularly through the development and introduction of hybrid maize and through outstanding work on coffee and tea. A widespread and diversified network has been established, built largely on the research institutions founded in the pre-Independence period. But the research system is not at present generating technologies and information in several key areas necessary for future development: smallholder production systems, the economics of production, and food crops. Nor has the government seen solving the problems constraining research as a priority.

In order to respond to the demands of the changing structure of agricultural production, particularly the increasing importance of intensive smallholder production, Kenya's research system must deal with two fundamental problems: coordination and management, and orientation. Many institutions and ministries are involved in agricultural research, and coordination among them has proved to be difficult. Efforts to improve the direction of research have not been successful. In 1977, the Science and Technology Act was passed; this act created mechanisms for advising on research issues and for improving research direction, including the establishment of the Kenya Agricultural Research Institute (KARI). KARI was first placed under the Ministry of Agriculture, then transferred to the newly created Ministry of Regional Development, Science and Technology in 1982. In a subsequent government reshuffle in 1983, KARI was transferred back to the Ministry of Agriculture. It was intended that KARI would evolve into a comprehensive research organization providing national coordination, execution, and management of agricultural research, but in practice, most responsibility for planning and executing research and for supervising other research programs has remained with the Ministry of Agriculture's research division. The responsibilities for research work and KARI's involvement still need to be clarified.

Confusion on research coordination has contributed to a lack of effective management of the research programs. A major concern is the lack of direction in the allocation of resources to research programs and the effect this has had on shaping the patterns and content of these programs. Agriculture receives the greatest share of research funds in Kenya, about 70 percent of total research expenditures. Domestic expenditures and external assistance to research together have achieved a target spending level of 1 percent of agricultural GDP. This level of funding may be inadequate considering the importance of agriculture

to the economy and the fact that future increases in production are likely to be dependent on domestic research output. Many research institutes are inadequately funded. Because of this, there has been a tendency in the past to use funds to maintain existing programs rather than to establish priorities, prune nonpriority or poorly performing research activities, and initiate more responsive research projects. Inadequate monitoring and lack of clear priorities are especially critical in light of current and projected financial constraints. In the near future it is unlikely that research will receive considerably more resources, so existing resources must be used more efficiently to achieve results. However, although KARI was intended to play a key role, there is at present no effective mechanism to control the allocation of resources, to ensure efficient resource use, and to avoid duplication.

Orientation of research programs is a second critical issue. The tradition of agricultural research in Kenya derives from the colonial orientation toward serving mainly large commercial farms where purchased inputs were regularly used and many operations mechanized. Research findings were based on pure, row-planted crops, achieving maximum biological yields was the goal, and varietal selection tended to be biased toward optimal husbandry standards. Relatively little research has been done on smallholder problems, such as labor availability and use, economic constraints, suboptimal input use, and intercropping, and on traditional smallholder food crops other than maize. Research results for traditional food crops, particularly legumes, oilseeds, sorghum, and millet, have been limited and unsatisfactory.

The failure to translate research policy objectives into results is largely a result of institutional weaknesses and poor management. Confusion over the location and role of KARI and its relation to ongoing research activities under the Ministry of Agriculture deflected attention from the problems of research content and direction. Poor direction and resource allocation are part of the larger problems of weak management and institutional systems within the Ministry. However, the lack of attention to these problems shown by senior decision makers reflects a limited appreciation of the importance of research to furthering agricultural development. Research is a long-term effort, and results are not apparent for years. In the more short-term focus of many public officials, research problems have tended to be pushed out of the way by more immediate concerns and crises. The gap between objectives and actions is critical in this area and illustrates the need to evolve effective strategies to link the more distant objectives with present actions and priorities.

RECENT DEVELOPMENTS AND FUTURE TRENDS

The government of Kenya has taken some important steps since 1981 to implement some aspects of its policy statements, including a sharp increase in the producer prices of some key agricultural commodities, notably maize, wheat, and sugarcane, and the introduction of an incentive price for beans; relaxation of restrictions on the maize trade (although this has been piecemeal

among districts); a reexamination of maize marketing problems and the NCPB debt situation; and initial efforts to improve management and budgeting in the agricultural ministries. These actions reflect a movement toward implementing many of the goals contained in the Fourth Development Plan and an effort to deal with the severe, but hitherto unacknowledged, institutional constraints within the government. There is clearly an awareness that agricultural growth has slowed and that major problems need to be addressed. But why did it take so long to make these important policy changes, when evidence existed in the 1970s that growth was slowing and changes needed to be made?

The answer lies largely in the current economic situation and the droughts of 1979 and 1980. For the first time since Independence, Kenya is facing a major economic crisis. Although there were certainly bad years previously, Kenya has enjoyed high growth rates and abundant supplies of external financing. Like most other oil-importing countries, Kenya was affected by the rapid rise in world oil prices in the 1970s. The country was able to weather the first crisis in 1974, then found the constraints alleviated in the coffee boom of 1977. Falling coffee prices, the continuing dependence on coffee and tea exports, and further increases in oil prices severely affected the economy after 1978. In 1979 and 1980, droughts in several areas of the country led to a fall in agricultural production and to costly food imports. Although agricultural production recovered in 1981, a growing balance-of-payments deficit, increased reliance on external borrowing, and domestic economic contractions have affected economic performance. Faced with sharply reduced resource availability, the government has directed its attention toward maximizing the returns to existing resources. Two government papers have investigated the problems of parastatals (a major drain on public resources) and government expenditures (Kenya, 1979 and 1982). NCPB in particular has come under scrutiny, not the least because of its sizable annual losses and borrowing from the government to finance its reserve stocks. Shortages of resources have led to new interest in improving the resource allocation process to ensure that priorities are funded.

The droughts of 1979 and 1980 focused attention on food production and security problems. Rapid agricultural growth in the preceding two decades had made many Kenyans complacent about food supplies and future agricultural development. Although it was apparent that lagging agricultural growth rates and rapid population increases in the 1970s meant that the rate of growth of per capita food production was falling behind the rate of population growth, many policy makers insisted that the problems were caused only by drought. The National Food Policy Paper, however, showed that the food problem was more than one of temporary production declines due to poor weather. The Food Policy Paper was debated widely both within the government and by other agricultural institutions and interest groups. However, there are some indications that recent bumper crops of maize and beans may have deflected the attention given to these issues, although support remains for food security and storage programs.

The introduction of new incentive prices for maize and other crops signals

an awareness among government policy makers that incentives are necessary to encourage domestic food production. The issues of marketing controls and systems are still under review. Policy makers recognize the need to resolve the more tangled financial problems of NCPB and the drain these have been on the Treasury. Neither the potential costs of proposed food reserve programs nor the impact of inefficient market controls and channels have been as clearly recognized. Dealing with NCPB's finances or producer incentives alone is only a partial solution.

The move towards implementation of policy statements is encouraging; whether it will be enough to spur further agricultural growth remains to be seen. The most fundamental problem facing Kenya's agricultural sector, that of providing adequate food and employment for a rapidly growing population on a small base of arable land, has yet to be fully realized and dealt with by most decision makers and politicians. The issues of population growth and land use are politically and emotionally sensitive, yet any agricultural policy framework in Kenya must confront these problems or development will ultimately stagnate. These are, however, long-term issues that have tended to be ignored in an atmosphere of short-term policy responses. The government has only begun to act on many other problems constraining development: the sector's limited absorptive capacity, hindered by institutional weaknesses and lack of management; the need to develop agricultural services to support intensification of production; and the need to lay strong technical foundations for growth through strengthening the research system. A renewed focus on the intensification of production, particularly among smallholders, is the best strategy to handle the problems of dwindling land supplies and population increases. This is essentially the strategy developed in the Fourth Plan, which provides the outline of what needs to be done. To be successful, however, such a strategy will demand a greater attention to implementing this policy framework. Kenya's farmers have repeatedly shown themselves to be quick to adopt new technologies, responsive to price incentives, and knowledgeable about the constraints—both natural and induced by policy—that they face. The policy environment is thus important in tapping their capacity for development. Eloquent policy statements, however, are no substitute for appropriate actions.

The experience of Kenya in implementing stated policy suggests that government officials need to pay more attention to the gap between plans and actions. Policy statements are not effective policies unless they are implemented. In retrospect, actions become *de facto* policies. There is always a need to adapt to changing circumstances and accommodate competing interests in the course of running a government. But in an atmosphere characterized by the underdeveloped institutions, insufficient resources, and shortages of management skills that characterize the environment of most decision makers in developing countries, there is the temptation to respond to the short-term problems, the crises, and the pressing issues while the long-term focus is lost. Reconciling actions with plans requires better strategies linking the two and better resource allocation systems to ensure that priorities are identified and supported.

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