chapter 13

Input and Output Marketing Systems: A Nigerian Case

S. O. Olayide and Francis S. Idachaba

Nigeria and many other sub-Saharan countries are finding that adoption of new high-yielding varieties is severely constrained by existing farm input supply and food-marketing systems. Like other sub-Saharan countries, Nigeria imports most of her modern inputs because of the nearly complete absence of domestic manufacturing capabilities. Availability of these inputs to farmers depends on procurement and internal distribution efficiency. Unlike many other African countries, Nigeria in recent times has not had to depend on price taxation of crops to secure revenue. Yet output-marketing systems continue to put severe constraints on output growth.

INPUT SUPPLY SYSTEMS

Dependence on imports for agricultural inputs has been increasing rapidly. Fertilizer imports during 1970–80 grew at an average annual rate of 34 percent. In 1979, Nigeria produced only 35 thousand tons of superphosphate at the Kaduna factory, about 8 percent of the total supply. In 1981, domestic production rose to about 40 thousand tons but made up only about 4 percent of total usage. Even limited domestic production depends on importation of phosphate rock from neighboring West African countries. Although Nigeria has some domestic assembly and formulation capacity in pesticides and farm machinery, the bulk of domestic requirements are still imported.

It is with great regret that the editors note the death of Dr. S. O. Olayide from a sudden illness in 1984, shortly after his contribution to this chapter was completed.

Annual imports of inputs have varied considerably. Over 1970–78, the coefficients of variation of physical imports of ammonium sulphate, single superphosphate, and NPK were 31 percent, 29 percent, and 29 percent, respectively. The comparable instability indexes for CIF prices of fertilizers are 15 percent for 1960–70 and 44 percent for 1970–80. Nigeria receives most of her farm input imports from a few countries; as a result, instability in these countries is easily transmitted to Nigeria.

Variability in farm input imports not only is a disincentive to production but creates output fluctuations. It may be due to several factors: fluctuations in foreign exchange earnings; instability of national government's input policies; inefficiencies in import arrangements for farm imports, whether public or private; and fluctuations in supply conditions in countries that export to Nigeria. Instability in supplies of farm inputs has undesirable consequences for input distribution and marketing. These include (1) poor markets for public and private investments in marketing infrastructures, such as warehouses for fertilizers, pesticides, and farm machinery; (2) the continuing underdevelopment of farm input, marketing, and credit institutions; (3) less investment in market promotion, resulting in delays in realization of marketing economies of scale and slow growth of markets; and (4) frequent and sudden revisions of tariff and nontariff restrictions of farm input trade.

Fertilizer

In 1976, the federal government centralized procurement in the Fertilizer Procurement Unit of the Federal Ministry of Agriculture. This step was taken to relieve state governments of the financial burden of fertilizer imports and subsidies, to end the chaos resulting from separate orders by state governments, and to reap the quantity discounts available on large orders. Initially, the federal government subsidized 75 percent of the costs of fertilizer importation, port clearance, and transportation, with farmers paying the remainder. States bore the costs of internal transportation. Federal government subsidies were later reduced to 50 percent, while states were to pay 25 percent of the subsidy plus the costs of internal distribution. In May 1983, the federal government reduced overall public subsidies on fertilizers for 1984 to 50 percent—35 percent federal and 15 percent state.

Now, when fertilizer shipments arrive, contracts are awarded for inland transportation from the southern areas. In most states, the fertilizer is delivered to the fertilizer depot at the state capital, though in a few cases the fertilizer is delivered to four or five zonal depots. The state government contracts transport from the state capital to stores in the local government headquarters. From there it is hauled to village and district stores in state government and local government trucks. Most states distribute directly from state central warehouses to

local government areas, using a variety of government, parastatal, and private agents to distribute supplies to farmers.

The system has several drawbacks. State projections of requirements are often low, since they are usually based on the previous season's figure adjusted by an annual increment. Fertilizer imports sometimes arrive many months after recommended application dates. Table 13.1 shows that even in northern projects assisted by the World Bank, the percentage of total deliveries arriving on time is low.

Because of untimely deliveries, fertilizer applications are well below recommended dosage per hectare and therefore insufficient, ineffective, and wasteful (Falusi and Adubifa 1975). Enormous storage and warehousing bottlenecks and high costs are incurred when fertilizers arrive long after recommended application dates and thus must be stored for the next season. In Lagos State, for example, closing stocks were 90 percent of average total stocks handled during 1980–81. Farmers incur losses from failure to realize the full yield potential of new varieties that require fertilizers for maximum yields. Since farmers are unsure of the fertilizer supply situation for the next season, they tend to ration their current supply.

The fertilizer subsidy scheme during 1976–82 introduced inefficiencies into the procurement and distribution system. With demand growing and the

Table 13.1 Fertilizer delivered by recommended application date for northern Nigerian agricultural development projects (percent)

Agricultural development project and locality[a]	Percent of total fertilizer available in May		
	1977–78	1978–79	1979–80
Funtua			
Bakori district	44.4	61.4	50.2
Funtua district	36.2	60.7	34.7
Malumfashi district	24.5	60.0	51.9
Faskari district	24.4	67.4	58.1
Kankara district	8.5	52.9	37.9
ADP mean	25.1	57.3	53.7
Standard deviation	24.7	21.9	23.6
Gusau			
Chafe development area	20.6	33.5	26.8
Kotorkoshi development area	32.3	38.2	46.6
Bungudu development area	19.1	29.7	32.8
Kaura Namoda development area	24.3	24.1	36.9
ADP mean	26.1	29.5	35.1
Standard deviation	18.5	13.0	16.4

Source: Okorie and Idachaba 1983.
[a]These are ADPs assisted by the World Bank.

quantity of imports and distribution limited by the size of the subsidy budget, farmers frequently pay prices higher than the subsidized price—and possibly as high as it would have been without subsidies. The policy of uniform subsidized prices throughout the country has discouraged private firms and cooperatives from participating in distribution beyond the state capitals, except under contract. Participation without refunds from government for transportation and other costs would result in heavy private losses. In the agricultural development projects assisted by the World Bank, for example, fertilizer is hauled to distant farm service centers at great financial cost to the project (Nigeria 1978). Finally, centralization of control has meant that no fertilizer is imported by the private sector except on contract for the government. Consequently, no fertilizer is available from the private sector, even at the unsubsidized price.

Storage facilities at all levels have generally been inadequate, especially in years of abnormally high imports, such as 1981. This has caused either spoilage or large financial outlays for rental of temporary storage facilities. Transportation facilities of state ministries have been grossly inadequate in many states, and communication between state capitals and remote villages has been poor.

Other problems with fertilizer distribution include late release of funds by government; poor fertilizer packaging, especially from the Kaduna superphosphate factory; inadequate or practically nonexistent soil-testing programs; ineffective extension coverage; unsuitable fertilizers for particular ecological zones; lack of adequate warning from the ports about fertilizer delivery schedules; and failure of many contractors to accompany fertilizer consignments transported by rail, resulting in losses from improper handling.

Pesticides

Pesticides have long been used in Nigerian agriculture, especially for cocoa, cotton, and groundnuts. Importation and distribution have remained largely in private hands. Problems include an inadequate network of depots in the main producing areas, small markets for particular pesticides, and market entry barriers arising from market dominance by a few multinational firms. Other difficulties include price collusion and stocking and inventory control problems that result from inefficiencies of the pesticides subsidy policy.

Cocoa pesticides were the first pesticides to be used on a large scale in Nigeria. Their use was subsidized beginning in 1959, yielding substantial benefits to farmers, given significant own-price elasticities of demand for this input (Idachaba 1976; Idachaba and Olayide 1976). However, the scheme encountered administrative and operational problems.

Announcements of subsidized prices payable by farmers effective April 1 each year were often delayed (Idachaba 1981). The decisionmaking process on subsidies involved three major steps. First, the Western Region Ministry of Agriculture and Natural Resources invited quotations on current unsubsidized

prices from pesticide supply firms. During 1965 to 1975, these letters were dispatched in January, only three months before the subsidy year began. The second step was the interministerial meeting on the subsidy scheme, typically held in March. The third step was executive council approval, usually given during June. In only 1 of 11 years was executive council approval given before the April 1, budget year and in three of the last four years approval was not given until July. Because of these delays, supply and distribution firms were unwilling to bear substantial risks on contracts for forward delivery and placed inadequate orders for overseas supplies. There also was diversion of pesticides from high-subsidy to low-subsidy states when price differentials exceeded transportation and marketing costs.

Finally, the effectiveness of pesticide subsidies was severely limited by the high cost of sprayers (Dlamini 1975). The first subsidies on sprayers were granted only recently, over 30 years after the pesticide subsidy program began.

Machinery

Human labor supplies over 98 percent of farm power in Nigerian agriculture. Substitution of cheaper sources of farm power is urgent to expand cropped area and to intensify production. In addition, the relative prices of machine and human power have changed as a result of minimum wage laws and the inflationary consequences of the oil boom, making labor-saving devices relatively more attractive.

The supply and distribution of farm implements is plagued by many problems including lack of spare parts, supply of inappropriate farm machinery by government-appointed contractors (many of whom know little about farm machinery), grossly inadequate repair and maintenance capability, and poor execution of government tractor hiring and other subsidy schemes.

Credit

Inadequate credit has curtailed the growth of farm input markets, particularly farm machinery, and consequently has curtailed the capitalization of Nigerian agriculture. There are two major instruments for supplying farm credit. First, there is the National Agricultural and Cooperative Bank (NACB), established by the federal government to disburse farm credit at subsidized rates to the agricultural sector. Second, there are directives from the central bank to the commercial banks on minimum lending quotas and central bank guarantees for 75 percent of loans by commercial banks to the agricultural sector. Credit generally has not been available to small-scale farmers, who produce the bulk of marketed food supplies. Spatial coverage and lending strategies of the NACB have been poor, and credit has been monopolized by absentee farmers, retired civil servants, and soldiers.

Most farm credit, therefore, comes from informal sources, both noninstitutional and institutional. Noninstitutional sources include friends, relatives, neighbors, licensed buying agents (produce merchants), moneylenders, and traders. Institutional sources include cooperative societies, farmers unions, *esusu* (credit) societies, and organized age groups.

Four features of these informal sources of credit are pertinent. First, loan processing time is very short, as assessment is based less on the viability of the proposal than on personal relationships and knowledge of the borrower's background. Second, interest rates, not often explicit, are high enough to cover risks of loan defaults, especially as no marketable collaterals are issued. (For example, moneylenders simply have borrowers sign for amounts higher than they actually borrow, to cover interest. Buying agents contract to buy all of a farmer's future crop at a predetermined price, from which the loan is deducted, or take the future crop as collateral, in which case the lender exercises usufruct rights over the crop until the loan is repaid. The implied interest rates are quite high.) Third, there is little or no loan supervision. Fourth, debt-servicing charges are sometimes high. (Moneylenders, for example, often hire people to harass potential loan defaulters.)

Produce marketing cooperative societies are constrained in their credit activities by limited funds from the commercial banks, by limited grassroots membership, and by management and manpower deficiencies, which make membership loyalty difficult to sustain. Informal credit is typically small scale and is inadequate for market infrastructural investments. In fact, credit from the licensed buying agent tends to entrench the produce and input marketing system.

Seed

The National Seed Service (NSS) was launched in 1976 to coordinate seed multiplication efforts throughout the country and to produce foundation seed for distribution to certified seed production agencies. The NSS works with research organizations and promotes development of manpower resources, seed certification and testing, and interstate marketing. Supply and distribution have been hampered by slow development of seed multiplication programs by the states; by inadequate allocation of investment resources; by inadequate drying, processing, and storage facilities; and by rapid turnover of trained staff.

In the states, supply and distribution from state seed multiplication units have been hampered by uncertainty in funding of these efforts; by multiple ministerial responsibilities of project managers of the units; by lack of seed drying, testing, and storage facilities; and by lack of training facilities for low-level employees.

Seed marketing through noncommercial channels, such as the extension

arms of state ministries of agriculture, has failed to supply farmers the right quantities of seeds at the times they need them most (Idachaba 1980b).

FOOD MARKETING SYSTEMS

Marketing Boards

From colonial days to the oil boom of 1974, the economy was characterized by a dual food-marketing system. One arm was the relatively well-organized commodity export system, whereby state produce-marketing boards (and, later, regional produce-marketing boards) bulked farm produce for both the domestic and export markets. In 1976, given the inflow of revenues, the regional marketing boards were replaced by commodity boards for cocoa, groundnuts, cotton, palm produce, rubber, and grains. These boards have been relatively effective only in those commodities for which private outlets were nonexistent or strictly controlled. Cocoa and cotton are examples.

The old marketing boards were fairly efficient in getting the agricultural surplus to ports for export, despite notable abuses by some licensed buying agents, responsible for procuring scheduled crops. The boards and the Central Nigerian Produce Marketing Company had a network of storage and warehousing facilities and maintained a system of grades and quality differences in conformity with world market standards.

A guaranteed minimum producer price scheme was launched in 1976–77, by which the government, through the new commodity boards, serves as buyer of last resort. Actual purchases have been small, because announced prices have been consistently below domestic market prices. In fact, there does not appear to be any firm basis for determining levels of guaranteed producer prices. There was probably no alternative, since the commodity boards had neither the storage capacity nor the procurement facilities to purchase all that was offered, especially commodities produced across many agroclimatic zones.

The Traditional Marketing System

The traditional food-marketing system comprises thousands of private sector itinerant traders, assemblers, transporters, processors, commission agents, and space arbitragers. This system services the needs of consumers in both villages and major urban centers. There is evidence that the system has been relatively efficient in integrating the markets of various locations, in providing storage facilities, and in equilibrating supply and demand (Hays 1975).

However, it has worked efficiently only within the limited context of

segmented regions, rather than as a truly integrated national market. Rural feeder roads are not all-weather roads, which has made most of rural Nigeria inaccessible in the rainy season. Few transporters and assemblers reach remote sources of food supply or demand. Market information services are rudimentary. There is little reliable information on crop outlook, supply and demand balances, prices in distant markets, stocks and inventory in major supply sources and markets, or new technology and methods of application. Areas of surplus coexist with areas of need because of grossly inadequate market information. Most rural markets do not have concrete floors and even fewer have lockup stalls. Virtually none have storage facilities. Urban markets, usually multipurpose, are generally congested and lack sanitation, storage, and parking facilities.

Cooperatives are involved in food marketing, although they are more prominent in marketing export crops such as cocoa, cotton, and tobacco. Serious cooperative involvement in farm input and food marketing in Nigeria is hampered by administrative, financial, and management difficulties (Idachaba 1982).

Grain Reserves

The 1973–74 drought dramatized the need for a strategic grain reserve for national food security. This led to a program aimed at building 250 thousand tons of grain reserves by 1980, an amount roughly equal to 2.5 percent of annual production.

Although traditional storage (in *rhumbu*—granaries made of earth or woven straw) for millet and sorghum in the northern states has generally been efficient with respect to cost and product quality, efforts to increase food production will strain these facilities. Average storage capacity per rural household needs to be raised, and insect and disease control need to be intensified. Modern storage technologies have not been developed for roots and tubers, and greater production is expected to result in major storage and marketing problems. Similarly, storage of maize in the south poses more problems than in the north because of higher moisture. Efforts have been made to develop improved cribs, but storage losses are still substantial.

CONSTRAINTS ON INPUT SUPPLY AND FOOD MARKETING

The sharpest increases in agricultural production in Nigeria up to 1970, as in most of sub-Saharan Africa, occurred in export crops, mainly through expansion of smallholder cultivation onto virgin land. This was feasible during most of the 1940–70 period, given farm labor costs, off-farm opportunity costs of

farm labor, the relative prices of labor substitutes such as machines, and relative farm producer prices.

Major changes in the technology of smallholder agriculture also occurred, including pesticides and new seed varieties in cocoa production; new seed varieties and insecticides in cotton production; and use of seed-dressing chemicals, new seed varieties, and phosphatic fertilizers in groundnut production. Export prospects were good, especially with the tight world market for oilseeds in the 1940s and 1950s. The real constraint in exports was on the production side—supply constraints for purchased inputs were more important than output marketing or labor constraints.

In the postcolonial era, there have been three constraints on domestic food production. One, the swelling urban sector has caused soaring demand for marketed food and raised the cost of agricultural labor supply. Two, smallholder agriculture has been handicapped by disorganization in the food-marketing system. Three, domestic food production does not attract international capital and management as export crops do. Although production of food has risen, domestic food prices have soared and food imports have increased. To improve food marketing, Nigeria introduced marketing parastatals and guaranteed producer price schemes. On the input side, the government subsidized inputs and became directly involved in input marketing.

The Funtua agricultural development project assisted by the World Bank is an example both of the power of improved input supply and the constraint imposed by a poor marketing system. Maize was introduced as a new crop. With new fertilizer-responsive seed varieties and increased availability of fertilizer, maize production rose from 300 tons in 1975–76 to 57,300 tons in 1979–80. The bumper crop in the latter year threatened a market collapse. The Nigerian Grains Board, buyer of last resort at the guaranteed minimum producer price, failed to purchase maize, and Funtua ADP management had to purchase directly. The same experience was repeated at the Ayangba ADP.

During drought, the imperfect food market and farm credit systems combined to force farmers to sell short: they were induced by unaccustomed high farm gate nominal producer prices to part with farm produce in response to unusually active farm gate competitive bidding, only to buy produce back later at even higher prices. Rural areas were thus depleted of marketable surpluses—resulting in a paradoxical situation, in which food prices in some terminal markets were lower than in rural primary markets.

Thus, since 1970, the shift in public emphasis from export crops to food production had been associated with a shift in the relative importance of different constraints. On the input side, labor has become a more important constraint than purchased inputs, although the problems with fertilizer deliveries show that input delivery systems remain a great problem. On the output side, market institutions to handle surges in food production have been so inadequate as to pose a threat to food growth strategy.

Naturally, constraints of input supply and output marketing differ among states and regions, depending on the levels of development of rural physical infrastructures, degrees of ruralization and urbanization, and the degree of development of the rural institutions. Marketing constraints in regions with higher degrees of urbanization appear less important than farm input supply constraints. The opposite is true in regions with more rural areas, emphasizing the importance of infrastructure.

INPUT SUBSIDIES AND DISTRIBUTION

Whether more emphasis should be placed on input or output subsidies is an empirical question. An earlier study demonstrates that adjustment lags are shorter with input prices than with output prices and that input subsidies are to be preferred, given reasonably assured markets for crops (Idachaba 1976). However, in the case of fertilizer, central procurement and the large subsidies that constrain the quantity imported have restricted total quantities on the market, thus hampering growth of usage (Idachaba forthcoming). Farm input subsidies combined with central procurement and distribution introduce disincentives for private sector participation in input distribution. A crucial issue for policy is how to pursue pricing objectives in these areas while using the private sector to maximum advantage.

Table 13.2 Subsidies on two farm inputs, Nigeria, 1979–82

Input	1979–80	1980–81	1981–82
Ammonium sulphate fertilizer (ton)			
CIF price—landed cost at Lagos (*naira*)[a]	90.00	108.00	95.26
Charges, clearing, transport to state capitals, and so on (*naira*)[a]	50.00	59.80	104.54
Distribution within state (*naira*)[a]	10.00	11.50	13.20
Total unsubsidized price (*naira*)[a]	150.00	179.30	213.00
Farmers' subsidized price (*naira*)[a]	36.00	42.00	50.00
Subsidy (percent)	76	77	77
Gammalin 20 pesticide (liter)			
CIF price—landed cost at Apapa (*naira*)[a]	3.10	3.69	4.42
Total unsubsidized price (*naira*)[a]	4.20	4.20	5.70
Farmers' subsidized price (*naira*)[a]	2.60	1.96	1.96
Subsidy (percent)	38	53	66

Source: Derived from data from Nigerian Cocoa Board, Ibadan.

Note: Adjustment of the exchange rate by one-third and keeping farm prices the same would raise the subsidies 4 to 6 percentage points for fertilizer and 10 to 15 percentage points for pesticides. The subsidy rates for mixed fertilizer (15-15-15) and for Perenox pesticide are similar to those for the inputs shown.

[a]N1 = $1.54.

Subsidies under Overvalued Exchange Rates

Despite an overvalued exchange rate, which reduces the real value of nominal subsidies, imported inputs have been heavily subsidized in Nigeria in real terms in recent years, as shown in table 13.2. This has resulted in the substitution of imported inputs for other inputs on a much larger scale than would otherwise have been the case. Farm input subsidies in Nigeria need to be analyzed within the context of income and resource transfers between sectors, oil-based distortions, and the theory of second best (Idachaba 1974). In this context, subsidies have a useful role in overcoming fundamental distortions of incentives between agriculture and nonagriculture, distortions simply beyond the capacity of agriculturally oriented policy to change.

In the colonial economy, crop taxation provided a significant part of regional government revenues. This provided incentives for local governments to boost crop production—typically, through subsidies. Over the years, the need to set priorities for subsidies among crops has become much greater. Subsidy priorities should be determined according to the crops that the inputs are typically used on; crops with high priority are those that contribute significantly to the country's food self-sufficiency objective, that minimize the country's food import dependence, that contribute substantially to the country's caloric and protein intake, or that contribute substantially to the country's export earnings capability. Yet farmers are often able to use subsidized inputs on other crops, defeating the policy objective. Furthermore, a policy to subsidize an input may require rationing, if foreign exchange constraints limit imports.

Complementarities among Inputs

Availability of appropriate fertilizers is the key to realization of the yield potential of new seed varieties. Improved maize seed and fertilizer are close complements, for example. Yet seed and fertilizer deliveries have not been synchronized. Spraying against cocoa pests was not readily adopted because there was no matching subsidy on sprayers—and credit was not available. Defects in the supply and distribution of pesticides have resulted in heavy losses of the productivity gains from fertilizers. Accelerated application of fertilizers encourages weed growth and raises the possibility of mass pest infestation. An integrated approach to farm input supply and distribution is necessary, but policy responsibilities for different inputs are often formulated and executed in isolated fashion in different government agencies.

Public Sector Input Distribution

The desirable role of parastatals in farm input supply depends on the size and density of markets. Another factor is the inability of private firms to recoup

their investments in input research and infrastructure. Therefore, in the absence of public involvement in these functions, there is underinvestment in agricultural extension and input supply and distribution infrastructure.

As the market for farm inputs grows, market size and market differentiation increase, and the divergence between private and social returns to agricultural extension decreases. Thus in the transition from traditional to modern agriculture, there is a tendency to rely more on the public sector for farm input distribution. However, the ability of a conventional line ministry to handle input distribution is seriously constrained. It is often unable to pay wages that would attract staff with required skills. Usually it does not operate as a self-accounting unit with ability to attract outside sources of finance and to engage in wholesale purchase of large quantities of required inputs. With quantities of inputs thus limited, officials often use nonmarket criteria for allocating available inputs among farmers. These officials become so preoccupied with the logistics of distribution that they neglect technical aspects of new inputs and do not utilize the most effective methods of disseminating new technology.

Parastatals, on the other hand, have considerable potential for an expanded role in distribution of farm inputs to small farmers. Being removed from regular civil service methods and procedures, the new generation of parastatals, such as the Kano State Supply Company, have the potential for making the quick decisions required for timely operations. They are also in a position to pay slightly higher salaries. However, performance of the new parastatals has been constrained in several ways. Officials of the supervising ministry find it difficult to divorce themselves from habitual procedures and processes. Boards of parastatals are filled with politicians, who see their main duty as overseeing contract awards for specific projects rather than the development of policies. Finally, there is a tendency for parastatals to rely permanently on government subsidies.

Private Input Distribution

With the projected commercialization of Nigerian agriculture, private sector firms are expected to handle farm input distribution in the long run. Although such firms have better decisionmaking processes, there are still some drawbacks. Market structures for some inputs, such as farm machinery, pesticides, and fertilizers, are dominated by a few multinationals. Such structures affect market conduct and performance, especially with regard to price collusion. Firms also tend to concentrate input distribution in areas that promise quick return, even if large sections of the rural sector, including whole regions, are left behind in the development process. Finally, the inadequacy of private credit facilities at the grassroots level has meant that only the rich and well-to-do can patronize these firms, thus widening inequalities of access to income-earning opportunities.

A promising avenue of reform is the creation of parastatals, discussed

above. These would facilitate the performance of private firms but would not engage directly in farm input supply and food marketing. Such institutions would provide services such as market information and coordination of pricing policies to minimize policy-induced distortions within the national economy. The wider the applications of an input, the greater the coordinating role of the facilitating institutions.

A second approach to reform is structural. It includes dramatically increased resource allocations for rural roads, on-farm storage, marketing infrastructure in rural and urban markets, rural processing facilities, and structural changes in the provision of credit. Removal of barriers to entry will accelerate the flow of marketing services, which will help to improve market structure, conduct, and performance. This approach to marketing reform requires a gestation period, involves less drama, and does not command the same enthusiasm from politicians and policymakers as, say, the announcement and inauguration of a board of directors for a new parastatal!

Agricultural Cooperatives and Input Distribution

Despite efforts by the government to establish farmers' cooperatives and farmers' unions, there is limited involvement of agricultural cooperatives in farm input distribution. At times the required investment has been too great, as in the case of large farm machinery. Or the market for new farm inputs has not been large enough to absorb initial investment outlays over a reasonable area, as was the case with the Cooperative Supply Association and cocoa pesticides. Many cooperatives cannot provide the credit for seasonal farm inputs in rainfed agriculture and, consequently, tend to favor consumer items with steady year-round demand. Finally, transportation and other marketing costs of inputs are not reimbursed by either purchasers or the government.

The accelerated cooperative input distribution (ACID) program proposes cooperatives as the primary outlet at the village level; a revitalized network of farmers' credit and marketing cooperative societies to provide the credit facilities to finance small-scale farmers' input purchases; a modified training, management, and visiting system, which insures two-way communication; and a unit to coordinate cooperatives engaged in farm input distribution (Idachaba 1982).

POLICY CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

The Nigerian experience highlights certain development problems in input and output marketing. Direct farm input procurement and distribution by the government has not been successful. Efforts to provide physical, social, and institutional infrastructure that would help private sector firms and cooperatives

to perform better would have been more productive. Government-sponsored parastatals can play an important part in facilitating such efforts, but more research is required to determine the role such institutions should play. It is likely that this role will be larger in remote areas.

Even though input subsidies may have been necessary in the early stages of transforming traditional agriculture, they can be a serious bottleneck to development, especially those provided by centralized procurement and distribution branches of a government ministry. If farm input subsidies are needed, procurement and distribution should be left to private firms, parastatals, and cooperatives, with the relevant ministry overseeing the public interest.

Empirical work needs to be done on the criteria for determining priorities among input and output subsidies. Issues concerning decisionmaking by government hierarchies are also important, as is work on the proper sequence of applying policy instruments. Empirical evidence is needed on the bureaucratic processes underlying execution of public policy to identify major bottlenecks, implementation lags, and distribution of benefits. Cost effectiveness of interventions must be taken into account.

More research is needed on the conceptual framework and specific methodology for fixing guaranteed minimum producer price levels. It serves little purpose to set guaranteed producer prices that are significantly above domestic market prices when the logistics of purchase and warehousing capacity are not in place. This will only cause farmers to lose confidence in government price incentive schemes.