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100-40626 91

Report  
of the  
Joint Somali Government and World Bank Study  
of  
Agricultural Incentives and Grain Marketing in Somalia

10 January 1984

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

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Mohamud Ibrahim Asser  
The University of Somalia  
Abdullahi Godah Barre  
Somali Ministry of Agriculture  
Alan B. Batchelder (consultant)  
Elliot Berg Associates  
Elliot Berg (consultant)  
Elliot Berg Associates  
Mohamed Khalif Sh. Yusuf  
The University of Somalia  
Gert Stern  
The World Bank

The World Bank's share of this joint study was carried out by Elliot Berg Associates, Alexandria, Virginia, with assistance from Bank staff.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

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SUMMARY

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY  
FINDINGS AND RECOMMENDATIONS

i. Three major problems have commanded the Study Team's attention: the prevailing uncertainty about public policy with respect to grain marketing and prices; the roles of ADC and of ENC; and the determination of official buying and selling prices. Our recommendations focus on these issues.

I. UNCERTAINTY ABOUT PUBLIC POLICY

A. Findings

ii. The Team spent much of its time trying to ascertain the knowledge and perceptions of farmers, traders, and officials on what public policy is in agricultural marketing. We concluded that most farmers, traders, and officials know about the two principal laws that apply to the grain trade. They know that most of Law No. 51 of 22 July 1971 remains in effect so that "the purchase ... sale, and distribution of maize and sorghum by private persons for commercial purposes is (still) prohibited", and violators remain subject to the possibility of fine and imprisonment. They know also that the Presidential Circular of 9 August 1982 has been interpreted as permitting farmers to store as much grain as they like and as relieving them of their former obligation to sell output to ADC. (Both laws are reproduced in Annex II of this Report.)

iii. Clearly, the roles of the three Government agencies that once monopolized grain and grain product markets are greatly reduced. ENC now handles only concessional imports of rice and flour (and of cooking oil). The Government pasta factory continues to process all concessional wheat imports, but its output competes with commercially imported pasta. ADA bought only 2,000 tons of maize in 1982 and only

265 tons during the first six months of 1983. But it bought 8,000 tons of red sorghum in 1982 and 9,600 in the first six months of 1983. The 1983 purchases are more than 30 percent of average purchases (30,000 tons a year) in the 1971-81 period. The Team could not tell whether the 1982 - 1983 increase signifies a reversal of the Government's policy of liberalization.

iv. Beyond any doubt, the private grain trade is now a thriving system with thousands of participants. Yet the Survey Team found in interviews that many of the private participants believe they take some risk when they trade in grain, and in some Districts no private grain traders can be found. The present legal situation thus causes fears and uncertainties that are raising the costs of the nation's marketing system, that are still impairing agricultural incentives, and that prevent the fuller development of private marketing institutions and competence.

#### B. Recommendations

v. Therefore, the first step the Study Team recommends is a clarification of the legal situation. Government should formally amend Law No. 51 to allow private persons to purchase, transport, and sell (as well as store) maize and sorghum for commercial purposes and to do so at whatever price they can obtain. This step should present no special difficulty. It is no more than Government said it would do in the policy program it submitted at the Paris Consultative Group Meeting in October 1983. It is a step to which Government is committed. It is in fact Government practice, at least for maize and sesame.

vi. The next step should be a major information campaign by the Ministry of Agriculture and, if possible, by other Ministries. This can in fact be started now, without waiting for formal legal change to be made more explicit. Agricultural Ministry officials

should personally explain the new policies (and, when it comes, the new law) to regional agricultural coordinators, to Regional, District, and Local Government officials, to the police, and to traders and farmers in major producing regions such as Bay, Lower Juba, and even lower Shebelli. A radio campaign might fruitfully accompany this effort.

## II. THE ROLES OF ADC AND OF ENC

### A. Findings

vii. Formal collection of market information is absolutely minimal. The mobility of private grain traders appears to convey market information along the roads, but none of this information is available within the Government. Present efforts to improve Government data collection will not meet the needs of fully efficient grain markets.

viii. In Somalia, as in most evolving agricultural marketing systems, good communications channels are few between the centers of political authority and remote farming locations and smaller market areas. Farmers, small traders, assemblers or wholesalers who find local government regulations or requirements obstructing the flow of trade have few avenues to voice protest or gain redress.

ix. ADC was formed to protect farmers from exploitation and to help them increase production and to "protect the interest and well-being" of consumers. ADC has been unable to fulfill most of its original objectives. It became mainly a distributor of imported maize and sorghum, and purchaser and reseller of a declining share of domestic marketings. Despite requests to be allowed to raise prices, ADC was compelled to offer farmers buying prices that during the 1970's became increasingly unattractive. Therefore, it acquired a bad reputation among farmers.

x. ENC also played an important part in grain marketing and price policy in the 1970s when it held the monopoly on the import and distribution of rice and wheat flour. ENC's present functions, though reduced, largely overlap those of ADC. In every Region, both have large underused staffs and storage facilities. The future of the two foodgrain - related agencies should be considered together.

xi. The diminished role of ADC as marketer of maize and sorghum and the loss of ENC's raison d'etre as import monopolist indicate that the roles of these agencies should be redefined. This is also desirable because of the new public policy orientation of the Somali government, which is encouraging a greater decentralization of economic responsibility, and growth in the role of the private sector.

xii. At present, responsibility for national food security policies is dispersed and little systematic attention appears to be given to planning in this area.

xiii. A public marketing authority is still needed and should have a wide array of high priority functions. That is to say, a public marketing authority should exist to carry out the policy decisions reached at the Ministerial level.

#### B. Recommendations

xiv. One Ministry, or Inter-Ministerial Group, should be assigned explicit responsibility for defining the nation's food security policies.

xv. A new implementing institution, a National Grain Agency, should be created by merging ADC and ENC. Its responsibilities should include the following functions.

Planning and managing the National Grain Reserve.

xvi. ADC and ENC possess considerable experience in grain storage, and they share management for much of the nation's large public grain storage capacity (well over 200,000 tons not counting Local Government warehouses). The NGA should combine this experience and build on it to become the national center of expertise on the acquisition, management, and protection of reserves. The NGA should manage those reserves. A later recommendation proposes that a technical assistance mission study national consumption needs and the volume and efficiency of rural storage to help the Government decide on the appropriate size of public grain reserves.

Information collection and dissemination.

xvii. To alleviate the important problem of lack of market information, the NGA should develop a national price collection and reporting service. In particular, the prices prevailing in each District's wholesale and retail markets should be collected and disseminated, for these prices are the most revealing information about actual and expected crop sizes. Having collected the data, the NGA should prepare daily or weekly market price reports which should be broadcast over national radio and made available in written form to all interested parties: extension agents, traders, coops, donor representatives, etc. However, the Agency must be on notice that the data reported is useful to farmers and traders only if it is current.

Facilitating communication.

xviii. To facilitate communication between the Central Government and private farmers and traders, the NGA should undertake a new task: to accumulate and disseminate information about prices and about supply and demand conditions and obstructions to the free flow of trade. The further, its District offices should be responsible

for reporting to its central office legitimate complaints of private farmers and traders.

Providing for collective consumption needs.

xix. The NGA should continue the present ENC/ADC function of supplying schools, hospitals, the military, etc. A new policy on pricing these goods should be elaborated, in line with proposed changes in overall pricing policies. To encourage efficiency at NGA, each of these other agencies should have the option of buying from other suppliers.

Sales of grain by State Farms.

xx. State farms should be permitted to sell either to NGA, or to Government grain consuming agencies, or to private buyers, NGA should supply the State Farm auditors with records of local prices so the auditors can check to see if the State Farm sales were made at reasonable prices.

Disposition of surplus storage facilities.

xxi. As soon as practical, the NGA should begin to sell or lease its unused storehouses. An effort to sell too fast would depress prices excessively, but Government should treat this large stock of capital as a source of income. The amount to be kept for the National Grain Reserve, for concessional imports, and for price-band support cannot be determined until a decision is made about the National Grain Reserve. But the present storage capacity is so excessive that income-producing uses should be sought as soon as possible.

Social objectives.

xxii. The NGA will inevitably be called upon to perform special activities serving national socio-political goals. In time of crop failure it will have the responsibility for famine relief. It may

also decide to subsidize prices paid by some grain consumers (or paid to grain producers) in poorer or more remote regions of the country -- in places where private traders might not go, or would go only at high cost. When the NGA is asked to perform these socially-desirable activities, their cost should be carefully set out, and they should be separately financed, by a line item in the national budget. The Grain Agency should not undertake any activity of this kind until the budget included a financing commitment. This practice may protect the agency from operating deficits and a shortage of working capital.

Encouraging competition and stabilization.

xxiii. The NGA should maintain a presence in grain markets as a competitor with private wholesalers in order to protect farmers and consumers against market failures of various kinds and also to dampen seasonal fluctuations in the prices consumers pay and farmers receive. Finally, the NGA should be responsible for implementing food aid agreements (including the relatively small but not insignificant amounts of edible oils), for coordinating food aid related activities, for keeping track of volumes landed and at sea, and for the initial sale of all food aid. Given these responsibilities, NGA will be in a position to determine the selling prices of concessional grain imports and to influence the open market prices of domestic grain. Because decisions in this area are so important, a separate section below is devoted to findings and recommendations regarding grain prices.

III. PRICES AND PRICE POLICIES

A. Findings

Buying prices have been too low.

xxiv. ADC buying prices have been fixed at too low a level. They are below costs of production in all Regions and using any of the

available technologies. The gap is large even with very low values imputed for labor costs, or -- put another way -- the return to labor in maize and sorghum production would be extremely low, if output were to be sold at ADC prices.

xxv. ADC buying prices are also below import parities. In December 1983, for example, the landed cost of imported maize in Mogadishu was about 3800 sh/ton, at the official exchange rate of 17.38 sh. per U.S. dollar. At parallel market exchange rates the landed cost of imports are of course higher: 7500 sh/ton at a rate of 35 sh. per dollar, and almost 11,000 sh. at an exchange rate of 50 sh. to a dollar. By comparison, the present ADC buying price of 2200 sh./ton is very low.

xxvi. The low official buying prices, to the extent that they are effective, discourage local grain production by making effort less worthwhile, by making grain production less attractive to farm households than other kinds of income earning activity, and by reducing the incentive to use new inputs and new technology.

xxvii. Recent official buying prices have also been low in real terms -- i.e., compared with changes in the general price level. Since Mogadishu consumer prices rose some 700 percent between 1973 and 1983, the official price of maize would have to be about 340 shillings a quintal (instead of the official price of 220 sh.) to remain equal to its real selling value in 1973. What the differences were in the later 1970s is not known though comparisons with Mogadishu's Consumer Price Index suggest a gap of 10 percent in 1975, 1976, and 1978, none in 1977, and a 25 percent gap in 1979 for both maize and sorghum.

Illegal activities have diluted the disincentives.

xxviii. Whatever the actual price figures, the drop in ADC's buying after 1976 implies that the differences between official and market prices were large enough to induce many people to violate the

law. The extent to which past sales took place at open market prices as against ADC prices is not known. It probably varied over time. ADC's maize purchases fell sharply after 1976, its sorghum buying dropped off after 1979. The contrast between official and open market prices became very large in the 1980s. Open market prices have been two to four times as high as official prices; and in 1983, ADC purchases of maize were virtually nil. So the potential price disincentives for production have been diluted and, at least in recent years have been nullified in the Districts where farmers have been able to sell at least part of their output at market prices. Therefore, the effects of the low official prices on real producer incomes, on their terms of trade, and on overall incentives were less unfavorable than the ADC's official prices suggest. In short, producer incomes and incentives were not harmed as much as implied by the official price series because the official prices were evaded.

Official selling prices have been too low.

xxix. ADC, ENC, and the pasta factory have all attempted to deliver benefits to consumers by selling grain, flour, and pasta at below-market prices. But in the absence of quantities large enough to press market prices down to the selling prices of the Government agencies, few consumers outside of those in collective consuming units (the military, police, schools, hospitals, etc.) appear to have benefitted from the agencies' artificially low prices. Some three-fourths of these low-priced sales appear to have been to other Government agencies. When this happens, there is in effect a transfer of income from the selling to the buying agencies. But to the extent that buying agency costs are reduced, the revenues of the selling agency are cut as that selling agency, in effect, subsidizes the buyers. When, in the Government's budget, the buying agency appears to have lower costs than it really has, and the selling agency has less revenue than it could get. When it is appropriate for one Government agency to subsidize another is

a complex question that could not be addressed in this Report. But the financial performance of the NGA and of the pasta factory would be better if they would sell all their products at market prices.

xxx. When individuals buy grain from ADC, ENC, and the pasta factory at below-market prices, the transaction is, in effect, an income transfer. The individual buyers who are privileged to buy at the low official sales prices enjoy "unearned income" -- what economists call "quasi-rents" -- because they can (and often do) immediately resell at market prices the grain products they have bought at the low official selling price. To the extent that this occurs, consumers receive no special benefits from government sales below market prices.

xxxii. The two most important Government policies affecting domestic cereals prices are not themselves price policies; so they affect prices only indirectly. These two policies are the government's policy with respect to liberalization of marketing, and its policy on imports. With respect to marketing liberalization, little has to be added to the previous discussion. Throughout the analysis of price policy, we assume that the chief problem of the 1970s -- the ADC monopsony and its attempts to impose below-market prices on producers -- is a dead issue, a thing of the past.

xxxiii. Import policy is central to the incentive system. Grain consumption in Somalia is comprised, to an uncommon degree, of imported cereals. During 1980-82, concessional grain imports made up 27 percent of all grain grown or imported into the country. This excludes grain imported for refugee relief. Commercial imports made up over 11 percent of that three year grain total. So only about 60 percent of grain consumption was produced domestically. The proportion of marketed grain provided by imports is of course much higher, at least half and probably two-thirds. It could be as high as three-fourths, depending on the assumption about the proportion of production that is marketed.

xxxiii. The sales prices set by government agencies for imported cereals have important equity and fiscal effects. The selling price decision affects the allocation of benefits if there is "underpricing." As noted earlier, consumers attached to recipient agencies benefit, and individuals who get access to low-priced imports enjoy "unearned income." On the fiscal side, intra-public sector financial relationships are affected. For example, a few years ago, ADC imported maize from commercial sources and sold it at a loss which was uncompensated by the central government budget; ADC continues to bear this debt burden, and its accumulating interest.

xxxiv. Import pricing decisions have little direct effect on grain prices for most consumers and hence on prices of domestically-produced cereals. What really matters is the quantity of cereals imports. If the quantity of grain imports injected into the economy is such that open market prices exceed the officially set selling prices, these official prices are not relevant (except for equity and fiscal considerations) since most transactions take place at the higher open market prices. The year 1983 provides a striking example. The supply of imported (concessional) maize ran out in mid-year, and open market prices soared, despite the fact that official selling prices remained unchanged.

xxxv. It is difficult to quantify the effects of the present food aid program on maize and sorghum prices, and few generalizations on this matter are possible. Everyone agrees, however, that the volume of food aid imports into Somalia is such that it has to be given closer consideration in national food policy deliberations.

#### Price policy procedural problems.

xxxvi. In Somalia, as in many LDCs, public sector procedures and institutions for decision-making in agricultural price policy are not well-developed. The Study Team had great difficulty in its efforts to ascertain the administrative procedures and economic principles that determine policy decisions in this area. ADC, ENC, and the pasta factory and the relevant Ministries appear to have

been unable to systematize and coordinate their policy-making. Food-aid policies, for example, seem to be made independently of other agricultural policy decisions. Partly this is because food aid is the responsibility of the Finance Ministry. More generally, the authorities do not in fact regard decisions about food-aid as something over which they have control; as they see it, the donors decide how much food-aid Somalia will get. Moreover, it is not clear that possible disincentive effects on domestic agriculture are either assessed or weighted very heavily. According to some officials, the more food aid the better.

xxxvii. The Study Team has observed from diverse perspectives the existing technical obstacles to increasing areas cultivated and yields per acre -- especially in the rainfed areas. The members agree that in their judgement higher real prices (compared with recent official prices) and, more important, assurances of higher real prices in the long run, will evoke a supply response large enough to justify the additional costs to be imposed on consumers.

#### B. Recommendations

##### Import quantities.

xxxviii. Concessional grain imports should replace commercial imports to the greatest extent possible. Substituting concessional for commercial imports obviously has no negative effects on import dependency or prices of substitute domestic cereals, and it has positive fiscal effects.

xxxix. In order to stimulate domestic production and to reduce dependency on grain imports, Government should make a commitment to a gradual reduction in concessional grain imports as a share of domestic grain consumption. If this recommendation is adopted, Government should attempt to obtain donor commitments to offset all cuts in food-aid with equal increases in assistance designed to enhance agricultural production. The rate of reduction in concessional imports should be consistent with growth in the total quantities of grain available in the country.

Import prices.

xl. Once the quantity of concessional imports has been decided upon, prices should be set at market-clearing levels. One way to determine what those prices are would be to sell these cereals at auction.

xli. Adherence to this rule would automatically bring about adherence to two subsidiary objectives: first, that inventories do not accumulate and, second, that buyers will be denied unearned incomes.

xlii. In the longer run, the rule should be to set prices at import parities, at realistic exchange rates (i.e., shadow equilibrium rates). This will require a policy on volumes of imports that will align domestic prices with international import prices calculated at the appropriate exchange rate.

xliii. If policy-makers wish to stimulate domestic production, they can tax imports at appropriate levels. If they wish to subsidize consumers, this can be done in one or both of two ways: by acquiring a sufficient volume of concessional imports, or by subsidizing commercial imports. In the latter case, the amount of the subsidy should be explicitly set out in the national budget.

Pricing domestically-produced cereals.

xliv. As indicated in the earlier section on the role of the national grain agency, there should no longer be administratively fixed prices for maize and sorghum, except for a flour price. The Grain Agency should influence prices only through open market operations at the wholesale level. It should buy more heavily at harvest time (to protect vulnerable farmers) and sell at the usual seasonal price to protect consumers. It will attempt -- through its buying and selling policies and through information dissemination -- to counteract instances of market "failure", i.e., where markets are not effectively competitive. Floor prices to stimulate local production should be set near market levels and should provide a market "of last resort," in case of especially large harvests.

#### IV. OTHER RECOMMENDATIONS

##### Further studies and analysis.

xliv. An in-depth study is needed to define options for national food security strategy. Technical assistance should be sought to help execute such a study.

xlvi. To help fill the gap in basic marketing/price information, a base-line study should be undertaken to identify, describe, and analyze the main features of the marketing system, its structure, conduct, and performance. Technical assistance can be made available for such a study.

xlvii. The microeconomics of alternative income earning strategies is little studied. Yet it is known that Somali households have many options, and that it is on this that supply elasticities of various outputs depend. The precise nature of the trade-offs should be the subject of detailed study and analysis.

xlviii. Once the duties of NGA are defined, a thorough management audit should be conducted with the help of an outside consultant to determine appropriate organization, personnel requirements, and job descriptions, and to advise on ways to deal with the redundancy sure to follow merger of the two agencies.

il. Very little is firmly known about the quantities of grain imports, and their impact on domestic prices and production. The issue of how food aid decisions should be made also warrants closer study. A comparative study of how other heavy food importers determine volumes and pricing policies would be helpful to Somali policy-makers.

l. A reflective and analytic study is needed on broad issues of development strategy for Somalia. The country has special features that require special reflection: its relatively small

agricultural sector, its large import volume, its particular dietary patterns, and its connections with the Gulf states. A broad overview of options for the future, taking account of these special features, would help in framing short-run food policies and overall development policy.

li. The elaboration of these price policy proposals, and the introduction of a new set of objectives for the National Grain Agency, will require the build-up of additional analytic competence. Technical assistance, with large training components, should be sought at an early stage to help meet these new needs.

GLOSSARY

ADC	-	The Agricultural Development Corporation.
Bakkar	-	Underground pit for storing maize or sorghum.
Der	-	The rainy season of October through December.
ENC	-	Ente Nazionale Comercio, the National Trading Agency.
Gu	-	The rainy season of April through July.
NGA	-	The National Grain Agency.
Quintal	-	100 kilograms.

- 1 -

Report of the Joint Somali Government and World Bank  
Study of  
Agricultural Incentives and Grain Marketing in Somalia

I. INTRODUCTION

1.01 This is the report of a joint Somali Government and World Bank Team. The findings and recommendations of the report represent the conclusions of the Team members only and are not necessarily those of the Somali Government or of the World Bank.

1.02 The Team consisted of three Somali members: Mr. Abdullahi Godah Barre from the Ministry of Agriculture, and Mr. Mohamud Abraham Asser and Mr. Mohamed Khalif Sh. Yusuf of the Faculty of Agriculture of the University of Somalia and three Bank representatives: Alan Batchelder (consultant), Elliot Berg (consultant), and Gert Stern. The Bank representatives were in the field for periods of time ranging from two and a half to six weeks during November and December 1983.

1.03 The Team interviewed retailers and wholesalers in most of the grain markets in Mogadishu and senior officials in all the relevant Ministries and marketing agencies. All the major grain-producing Regions were visited except those in the Northwest, where travel could not be arranged because of uncertain air service. Wherever Team members travelled, we visited town markets, villagers, and ADC offices and stores. We interviewed ADC, ENC, and local Government officials and District Commissioners. We talked with scores of retailers, assemblers, and wholesalers and held interviews of an hour or more with groups of farmers in 18 villages.

1.04 Three main questions guided the Team's work: how can the Somali Government's new policies of decentralization be moved forward in law and in practice in the area of agricultural marketing? What should be the roles of ADC and ENC? Finally, what should be the Government's policies on prices and on concessional grain imports? Cooperation between the visitors and the Somalis on the Team has produced a body of data, description, and analysis leading to findings and recommendations that all of the Team's members support.

1.05 As shown in the "Terms of Reference",<sup>1/</sup> the initial mandate of the study mentioned cotton and pulses. Given the priority for foodgrains, the brevity of the mission and the lack of basic information about marketing structures, the study of cotton and pulses was dropped. The responsible Somali authorities encouraged this decision. They proposed that cotton's problem and prospects could be examined during the Bank's forthcoming agricultural sector assessment.

1.06 A draft statement of findings and conclusions was discussed with representatives of the Somali Government, and this final draft takes into account the views expressed at that time.

## II. DESCRIPTION OF THE NON-PRICE CHARACTERISTICS OF THE MARKETING SYSTEM<sup>2/</sup>

### 2.01 A. Its Dual Nature

#### Two sets of marketing institutions.

The Survey Team found no written descriptions of Somali urban or rural grain markets. This lack added to the need for on-the-ground observations although time constraints were severe. Four days were spent visiting Mogadishu markets and 14 days visiting city, town, and village markets in the Lower Juba,

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<sup>1/</sup> Reproduced below as Annex I.

<sup>2/</sup> Annex III presents additional details about the grain marketing system.

Lower Shebelli, Middle Shebelli, and Bay Regions. In most cases, a pair of the Team's members went together to the Mogadishu markets, while two pairs went together to the markets in the Regions. The pairs were always made up of one Bank and one Somali Team member. They asked many questions about prices and business practices that both traders and farmers had reason to be reluctant to answer. The people questioned gave very generously of their time and rarely refused to answer a question, though hedged responses were common. Their answers along with information collected from publications and official statistics provide a reasonably clear picture of the salient characteristics of Somali grain markets.

2.02 As in many LDCs, the grain marketing system in Somalia is bifurcated. There exist side by side two sets of marketing institutions, one public, the other private. Among the private institutions, prices vary constantly in response to the usual laws of supply and demand. Among the public institutions, prices are determined by administrative fiat. But in the latter case, price changes are infrequent because of bureaucratic inertia. The prices charged by the public institutions have little impact on the prices generated in the private markets, but the large volume of grain imported through the public institutions becomes a major element affecting both supply and demand in private markets. This first section of the Report describes the non-price characteristics of Somali grain markets with emphasis on their duality, the great importance of imports, their underdevelopment, and indicators of the extent of competitiveness and of market failure. The next section describes the price performance of these markets.

#### The three public institutions.

2.03 During the 1970s, three public institutions dominated Somali grain markets. There were the Agricultural Development Corporation, ADC, the National Trading Agency, ENC (the abbreviation of the Italian name, Ente Nazionale Comercio), and the government pasta factory.

2.04 In 1971, ADC was given monopoly power over all trade in

maize and sorghum. "The purchase, storage, sale, and distribution of maize and sorghum by private persons for commercial purposes" was prohibited by Law No. 51 of July 1971, entitled "State Control of the Purchase Sale and Distribution of Maize and Sorghum".<sup>1/</sup> Each farmer was "authorized to store for domestic use up to one hundred kilos of maize or sorghum per season for each member of his family". All other maize and sorghum output was to be sold to ADC. The law directed ADC to "exercise the power to trade, store, import, and export maize and sorghum". ENC was given monopoly power over most other imports including flour, rice, and pasta. Private grain wholesalers seem to have disappeared though private retailing may have continued on a large scale especially to nomads. Farmers acknowledge that they stored grain in underground pits (bakkar) in their fields, instead of in the villages, as before, in order to evade the law. In 1977, the third public institution, the Government pasta factory, came on stream; concessional wheat became its feed stock; and ENC stopped importing pasta.

2.05 The actions of ADC during 1978 are representative of its role when it was the dominant actor in maize and sorghum markets. In that year, it bought 43 percent of estimated sorghum output and 29 percent of estimated maize output. It also sold 12,000 tons (30 percent of its sales) of maize drawn from its inventories of past concessional and commercial imports. Of the 31,000 tons of maize it bought, it moved 10,400 tons out of six "surplus" Districts and into "deficit" Districts. Of the 61,000 tons of sorghum it bought, it moved 43,100 tons out of ten "surplus" Districts and into "deficit" Districts. At year-end, its vast warehouses had 50,000 tons of inventories in warehouses with a capacity above 150,000 tons.<sup>2/</sup>

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<sup>1/</sup>Law No. 51 is reproduced below as pp. 1-2 of Annex II. It went into effect on 22 July 1971.

<sup>2/</sup>Details of ADC's purchases for each year are shown in Appendix Tables A-3-a and A-3-b. Details of ADC's inventories, purchases, sales, and interdistrict transfers during 1978 and during January-June 1983 are shown in Appendix Tables A-4-a through A-4-d. Warehouse capacity is shown in Appendix Table A-5.

2.06 No one has any estimates of the size of the private grain trade in the 1970's, but not until about 1979 did ADC, ENC, and the police begin to allow private grain traders to resume daylight public buying and selling. Restrictions were lifted on private trade in rice, flour, and wheat, and ADC began a gradual withdrawal from the maize and sorghum markets. By 1983, the three government agencies that once monopolized Somali grain markets were playing reduced roles. Now, ENC handles only concessional imports of rice and flour (and of cooking oil). The Government pasta factory continues to process all concessional wheat imports, but its output competes in the market with commercially imported pasta. In the first six months of 1983, ADC bought only 265 tons of maize. But it bought 9,600 tons of sorghum, some 10% more than it had purchased in all of 1982. ADC thus seems to have withdrawn from most of the maize market but is still buying sorghum in significant amounts. Its 1983 rate of buying was about 60 percent of its average (30,000 tons a year) during the 1971-81 period.

2.07 When the three Government agencies have exclusive legal control of the grain trade, they shared administration of the monopoly with Local Government retail stores and with Regional and District Food Committees that decided where grain would go. In some towns, Bur Akaba and Dinsor for example, Local Government retailers still sell some sorghum bought from ADC; but most of the Local Government retailers are now gone and most of the Food Committees are now inactive.

The private institutions in Mogadishu.

2.08 Mogadishu is divided into 16 districts or "villages" each with its own Ministry of Local Government civil servants and each with at least one retail grain market. Only 5 or 6 of the 16 districts have grain wholesalers. In Mogadishu as in the Regions, retailers usually sell maize and sorghum from sacks on the ground while retailers of rice, flour, and wheat sell from small shops in buildings. Rarely does the same retailer sell both groups of products. Retail sales of maize and sorghum are by volume in amounts of about 2500 and 830 grams. Rice, flour and wheat are often weighed and sold by the kilo. Among the 16

Mogadishu village markets, the number of each kind of grain retailer ranges from 30 to 60 observable at a single time.

2.09 In the few markets where grain wholesales do specialize, they specialize either in maize together with sorghum or in rice together with flour and some wheat. In other markets, the wholesalers pile rice beside sugar, coffee, lumber, drums of cooking oil, cartons of motor oil, and maize and sorghum. Among the half dozen Mogadishu districts with grain wholesalers, their numbers range from 10 to 30 -- the latter numbers found where the product mix is highly varied.

2.10 Supplies of maize and sorghum are brought into Mogadishu by a variety of agents. (Much more maize than sorghum comes into the city, and much of the sorghum is used for animal feed). Some wholesalers buy mostly from regional assemblers who deliver to Mogadishu. But most wholesalers go at least occasionally into the country, rent a truck, and bring back grain bought from the regional assemblers and from farmers. Retailers also sometimes go to Regional towns or to villages and buy a half to two tons which they then transport to and store in Mogadishu for their own use. Pooling seems to be common with five or six retailers going together to Koryolle or even to Jamame and filling a rented truck. Finally, farmers sometimes bring a few sacks into Mogadishu and sell to a wholesaler, to retailers, or they sit down in the market and become urban retailers for a day or two. The flour, rice, and pasta retailers buy mostly from wholesalers who obtain their stock from ENC, the pasta factory, or commercial importers. Rural assemblers also send into Mogadishu flour and rice sold by refugees.

#### The private institutions in the Regions.

2.11 In the Regions, four groups participate in the maize and sorghum trade: farmers, retailers, assemblers, and town, village and nomadic buyers. As in Mogadishu, many retailers and many wholesalers regularly exercise both the option of waiting for buyers and sellers to come to them and the option of traveling to the buyers and sellers. Farmers sell to nomads, to other farmers, and to assemblers, retailers, and consumers to whom the farmers go.

Sometimes, farmers become full-time retailers for a few days or weeks, or a farm family will have one wife retailing in town while another wife works on a farm. The assemblers collect grain for shipment to Mogadishu or to other larger towns or cities. Sometimes the assemblers buy by the 50 kilogram sack. Sometimes, they, like the retailers, buy five, ten, or twenty kilos at a time from the many farmers who sell as often as they decide they want cash. Farm families are able to make these successions of small sales because they are so successful in using underground storage to protect grain from insects. During the Team's November visits, the farmers' small sales seemed to be very numerous. Rarely do the assemblers sell to local retailers who say they are adequately supplied by farmers, who come to them, and by occasionally going themselves to the farmers. Sometimes the assemblers hire a truck to transport their grain to the city. Sometimes city wholesalers or retailers come to them. If the Team's observations were accurate and typical of most times and places, then the private participants in the market have alternative buying and selling options most of the time.

Division of the market between private and public.

2.12 Table 1 first estimates the amount of domestic grain production that has been marketed; then it calculates the division of those marketed amounts between private and public institutions, in tons and as a percent of the total marketed. The principal trend shown in this Table is the decrease, between 1977-78 and 1982-83, in the role of the public agencies. During the earlier two years, ADC handled 69-100 percent of marketed maize and sorghum (the 100% is surely an exaggeration due to the use of the 40% figure for years when ADC forced the sale of more than 40% of output). During 1982-83, ADC handled only 6 or 7 percent of marketed maize and sorghum. These are only rough estimates, but the role of the private sector is accurately portrayed as rising rapidly. The role of private institutions has also increased, since the 1970s, in rice, flour and pasta markets. These markets for imported grains are described in the section below titled "The Dominance of Imports".

Table 1

Domestic Cereals Production, Proportions Marketed  
and Division between Public and Private Markets: 1977-1983  
(Thousands of Metric Tons)

Calendar Year	Domestic Grain Production	Amount Marketed (40 percent of production)	Market Shares			
			ADC		Private Institutions	
			Tons	Percent	Tons*	Percent
1977	264	106	73	69	33	31
1978	261	104	104	100	0	0
1979	262	105	77	73	28	27
1980	268	107	24	22	83	78
1981	383	153	33	22	120	78
1982	405	162	11	7	151	93
1983	379	252	14	6	238	94

\*This is a residual obtained by subtracting ADC's reports of purchases from 40 percent of estimated output.

Source: Statistical Appendix Tables A-1, A-3-a, and A-3-b with ADC purchases of rice added to those of maize and sorghum reported in A-3-a and A-3-b.

The disincentive effects of existing legislation regarding ADC.  
2.13 Despite ADC's withdrawal from much of the market, and the existence of a thriving private trade in many Districts, most farmers, traders and officials do not believe that sales to traders are legally permitted. In this perception they are in fact correct. The prevailing law is still Law No. 51, of July 1971, that directs ADC to "exercise the power to trade, store, import, and export maize and sorghum". It prohibits private persons from purchasing, selling, or distributing maize or sorghum for commercial purposes. The only significant legal change is that made by the Presidential Circular of 9 August 1982, titled "Gathering, Safe-Guarding and Storing Farm Crops." This circular brought the innovation that, "Crops shall not be taken by force from the farmers."<sup>1/</sup> This phrase has been interpreted

<sup>1/</sup>Article 3-(ii) of the Circular which is reproduced below, in an unofficial translation, as pp. 3-7 of Annex II.

to mean that farmers may store as much of their production as they like so are under no compulsion to sell any part of their output to ADC. But this single phrase is the only modification that has been made to Law No. 51. So legally, private trade in maize and sorghum is still prohibited, and merchants can face fines and confiscation (reportedly always at the official buying prices) when they buy from farmers or from one another.

2.14 Obviously the prohibitions of Law No. 51 are being ignored in many Districts. But the exceptions to that general rule are important. In the sorghum-growing areas, farmers and traders say that ADC sometimes presses them to sell to it at official prices when they do not want to do so. In some maize exporting Districts in the Lower Shebelli Region, District rules obligate farmers to sell 15 percent of their production to ADC, though some Districts do not bother to enforce that rule. In some sorghum exporting Districts farmers sell only to nomads or to other villagers in small amounts, or to ADC because the District Commissioners enforce the existing law that if farmers do sell sorghum they should sell only to ADC. Merchants in the Bay Region said that truckers feared confiscation or delays if they carried much sorghum; so they generally refused to carry more than a ton at a time and they charged an extra 50 percent because of the perceived risks.

#### B. The Dominance of Imports

##### Importance in Urban Diets.

2.15 In 1977, the Central Statistical Department of the then State Planning Commission surveyed Mogadishu family budgets during the period, March-December. That Survey reported that food took 60 percent of family expenditures and that, of the total expenditures, 19% went to mostly imported grain, 10% to locally produced grains.<sup>1/</sup> From 1974-1981, imports of maize

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<sup>1/</sup> The proportions spent on various grain products were as follows: primarily domestic, 9.7% (sorghum 0.5%, maize 7.7%, ground maize 1.5%); primarily imported, 19.4% (rice 6.3%, flour 4.3%, spaghetti 4.0%, bread 4.8%).

were some 30 percent of total consumption. The ratio of imported to domestic grain in Mogadishu diets becomes three to one when allowance is made for maize imports and for the fact that little rice and no wheat are grown in Somalia. The weights reported here continue to be used in calculations of the Mogadishu consumer price index (the only price index calculated in Somalia).

Imports as a source of supply.

2.16 During the five years, 1979-1983, imports of cereals and of cereal products made up from 28 to 47 percent of the total tonnage of cereals and cereal products produced in or imported into Somalia. The actual figures are shown in Table 2 which shows annual imports of grain and of grain products, and the relative importance of domestic production, of commercial imports, and concessional imports between 1979 and 1983.

Table 2

The Relative Importance of  
Somali Grain Imports,<sup>1/</sup> 1979-83  
(Thousands of Metric Tons)

Calendar Year	Domestic Grain Production	Imports		Total	Percent of Total		
		Commercial	Concessional		Domestic	Commercial	Concessional
1979	262	48	102	412	63	12	25
1980	268	67	174	509	53	13	34
1981	383	77	193	653	59	12	29
1982	405	54	101	560	72	10	18
1983 <sup>2/</sup>	379	60	108	547	69	11	20

<sup>1/</sup> Includes flour but not pasta.

<sup>2/</sup> Forecasts.

Source: Mogadishu Office, World Food Program. For estimated division of imports among grains, see Appendix Table A-2-a.

During these years, commercial imports made up 11 to 13 percent, and concessional imports 18 to 34 percent, of total cereals

imports. Other estimates show even larger volumes of imports.<sup>1/</sup>

2.17 The 1982 and 1983 figures suggest that concessional cereals imports may have begun to trend downward. However, rainfall was low in the main sorghum-growing areas during the 1983 Gu (spring-summer) growing season and the rains failed throughout most sorghum growing areas during the 1983 Der (autumn-winter) growing season. The expected fall in sorghum output may bring a compensatory increase in concessional grain imports in 1984. In any case, the 1981-83 decline in grain availability shown in Table 2 seems to be a large part of the explanation of the rise in grain prices occurring in the fall of 1983.

Imports as a percentage of marketed grain.

2.18 Because not all domestic production is marketed, imported grain is a larger portion of marketed grain than of the total supply. In order to calculate the relative size of imports in Somali markets, an estimate is needed of the portion of production marketed. People familiar with Somali grain markets repeat the generalization, "Somali farm families market about one fourth of their grain production." But to the Study Team's knowledge, no one has collected any statistics adequate for an estimate of portion marketed. Here, based on estimates of population and of per capita grain consumption, is an estimate that 40 percent of production was marketed in 1982. The assumptions underlying this estimate are as follows:

Grain imports:	155,000 tons
Wasteage:	-12,000 tons
Inventory drawdown:	+30,000 tons
Net from refugees:	<u>15,000 tons</u>
Imports available for consumption:	188,000 tons
Domestic Production:	405,000 tons
Wasteage:	-21,000 tons
Seed (6,000 ha @ 10 kilos):	<u>-6,000 tons</u>
Production available for consumption:	<u>378,000 tons</u>
Total available for consumption:	566,000 tons

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<sup>1/</sup> An alternative set of estimates of grain imports was made in 1983 by the Ministry of Agriculture. The detailed figures are presented in Statistical Appendix Table A-2-b. They show much larger imports than do the estimates of the World Food Program.

Given these assumptions about the total amount of grain available for consumption in 1982, Table 3 adds assumptions about the total size of the population, its residential location, and its division between those who farm and consume their own grain and those who are nomads or live in urban areas and consume grain produced by others. Then Table 3 adds an assumption about per capita consumption by each residential group and from these assumptions draws a conclusion about total grain consumption by each residential group. The resulting estimate of 565,240 tons consumed is consistent with the preceding estimate of 566,000 tons available from imports, stocks, and domestic production for consumption.

Table 3

Estimate of Grain Consumption in 1982  
and Underlying Assumptions about Population Size,  
Residential Location, and Role in Grain Growing

Population Category	Number of People			Per Capita Grain Consumption	Total Grain Consumption
	By Residential Location	Acting* as Farmers	By Consumer Category		
Urban	1,160,000	116,000	1,044,000	200 kilos	208,800 tons
Farm	1,060,000		1,330,000	180 kilos	239,400 tons
Nomad	<u>3,080,000</u>	154,000	<u>2,926,000</u>	40 kilos	<u>177,040 tons</u>
TOTAL	5,300,000		5,300,000		565,240 tons

\*The "acting farmers" are urban people and nomads who, at least part of the year, farm, who consume as do other sedentary farmers, and -- this being the critical consideration here -- whose consumption is not traded.

2.19 To find the portion of domestic production marketed, a first estimate is obtained by adding to nomad consumption the amount urban people must buy after using all the grain available from imports:

Urban grain consumption:	208,800 tons
Less imported grain:	<u>188,000 tons</u>
	20,800 tons
Plus nomad consumption:	<u>117,040 tons</u>
Marketed domestic consumption:	137,840 tons

Then the portion marketed in 1982 would have been 137,840 tons out of production of 405,000 tons, or 34 percent.

2.20 But those calculations assume that the farmers consume no imported grain and that urban people consume no domestic grain (unless bought from nomads). Those assumptions are unrealistic. In the Lower Shebelli, some villagers report that "everyone in the village" eats pasta and rice and uses wheat flour for variety. Villagers near Jamame say that at least one-fourth of them eat rice twice a week. Assuming that 10 percent of farm family grain consumption is of imports, they must market an additional 23,940 tons. Then the portion marketed in 1982 would have been 161,780 tons divided by 405,000, or 40 percent.

2.21 From total population to imports as a percent of farm grain consumption, all assumptions presented here are rough approximations. Reasonable alternatives exist. Future research will narrow the possibilities. But at present, 40 percent appears to be a reasonable estimate of the portion marketed.

2.22 Application of this 40 percent estimate to the domestic grain production figures of Table 2, permits an estimate of the relative importance of imports in domestic grain markets. The details are presented in Table 3 of Part B of Annex IV, but the conclusions are shown here in Table 4. These figures make no allowances for changes in either private or ADC and ENC stocks; so the figures for individual years may be less meaningful than the figures for the five year averages. They show imports as 59 percent of total marketed grain. It is hard to find other low income countries that can rival Somalia in its dependence on imported grain.

Table 4

The Relative Importance of Commercial and Concessional Imports in Domestic Marketings of Grain and Grain Products: 1979-83

Calendar year	Total tons marketed*	Percent from each source		
		Domestic production	Commercial imports*	Concessional imports
1979	255,000	41	19	40
1980	348,000	31	19	50
1981	423,000	36	18	46
1982	317,000	51	17	32
1983	<u>320,000</u>	<u>47</u>	<u>19</u>	<u>34</u>
Average	332,000	41	18	41

\*Assumes 40% of domestic production is marketed.  
Source: Table 3, Part B, Annex IV.

Concessional imports as a percentage of marketed grain.

2.23 While total imports made up some 59 percent of marketed grain during the five years 1979-83, concessional imports alone made up 41 percent. That figure is also shown in Table 4. If the portion of domestic production marketed is less than the 40 percent assumed in the table, then the relative importance of concessional imports (and of total imports) is even greater than indicated here. Table 4 shows total grain imports and assigns them to the year of importation whether they were consumed or added to ADC and ENC stocks in that year. Table 5 reports only maize production and imports but attempts to assign imported maize to the year in which it was consumed. The Table shows that concessional imports providing 22 to 36 percent of all maize sold for consumption in 1976 and in 1977-82 (ADC's large commercial maize imports filled in the gap in 1977). These numbers are so large they beg the question, discussed later in this Report and in Annex IV, could concessional maize imports have depressed domestic prices?

Table 5

The Relative Importance of Concessional Maize Imports,  
1976-1983

Calendar year	Estimated tons sold for consumption	Portion of sales from		
		Domestic production	ADC commercial imports	Concessional imports*
1976	106,000	41	35	24
1977	70,000	63	40	n.a.
1978	55,000	78		22
1979	67,000	64		36
1980	94,000	47	17	36
1981	116,000	54	19	27
1982	93,000	65		35
1983	106,000	89		11

\*This column estimates sales of concessional maize for consumption each year. Some of the sales come from ADC stocks, some from new imports in 1982 and 1983, only a few thousand tons of concessional maize were imported; sales were from inventories.

Source: Table 4, Part B, Annex IV.

2.24 In 1983, concessional maize sales were only 11 percent of all sales -- some one-third of their relative size during 1979-82. Since 1982 there have been virtually no imports of maize. After August 1983, stocks were depleted, and this disappearance of imported maize probably goes a long way toward explaining the rise in maize (and in other grain) prices during the last months of 1983.

2.25 This Report excludes from most of its statistics and analysis grain imported for Somali's refugee population (estimated unofficially to total some 500,000 people) and grain exported to the Ogaden. The amounts are large. By World Food Program

calculations, grain imports for the refugees have been:

1979	30,000 tons	1982	77,178 tons
1980	112,000 tons	1983*	76,486 tons
1981	85,204 tons	*estimated	

Knowledgeable people guess that 25-30,000 tons of this grain are sold outside the camps each year. On the other hand, the Central Bank estimates that grain exports have risen in value from 21 million shillings in 1979 to 29 million shillings in 1981. (The implied volume is some 6,000 tons. Most of it goes to the Ogaden). The effects of these grain flows on Somali prices are simply not known.

### C. Underdevelopment

2.26 Somalia's grain marketing system is underdeveloped. It is so partly because of the dominance for some years of government institutions, partly because the large volume of imports reduces grain flows from country to towns, and partly because the private system has not yet developed many specialists and provides limited services. After 1971, ADC was the only legal agent for the purchase of maize, sorghum, and sesame. ENC was a major seller of rice and flour; and after 1977, the pasta factory was the processor and channel for concessional wheat imports. In the 1970's, there were many and there are still some retailers employed by Local Government. An informal trading sector persisted through the 1970s, for sale of grain within the villages and to nomadic buyers, but it was greatly reduced in size. Private institutions are still recovering from the trauma of the 1970s.

2.27 Compared to its livestock marketing arrangements, Somalia's grain marketing system is primitive. Livestock is moved hundreds of kilometers from gathering points throughout Somalia to a distant market across the Gulf. Complex social and economic institutions have developed over decades to handle the trade-brokerage arrangements, credit schemes, communications, relations

with shippers, veterinarians, fodder producers, and truckers. The structure of the trade is well defined; hundreds, even thousands, of participants are engaged in it; the number of animals involved is quite staggering - 1.5 million annually in recent years.

2.28 In 1980 the entire domestic grain market handled grain worth perhaps 85 percent of livestock exports but a much smaller percent of total livestock sales (exports plus domestic consumption).<sup>1/</sup>

2.29 The banana industry is the only other Somali agricultural industry with marketing structures comparable to those in the livestock industry. But even in the banana industry, the number of exporters is small (several hundred), the volumes involved are rather modest, and the marketing infrastructure less complex. For other agricultural goods, there is very little organized structure.

2.30 The structure of agricultural trade is different in Somalia than in most LDCs. There is usually a smallholder-produced export crop that is marketed by a parastatal agency -- e.g., coffee and maize in Kenya, coffee and cashews in Tanzania, cocoa, coffee, groundnuts in many West African countries. Whatever its defects, these export structures provide some experience with sophisticated marketing organizations. They are

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<sup>1/</sup>In 1980, livestock exports totalled 641 million shillings and grain and grain product imports totalled 381 million shillings (for 241,000 tons). If 40 percent of domestic production of 268,000 tons was marketed at the same prices as imports (Appendix Table B-6 shows that in early 1981, the prices of imported and of domestic grain were roughly the same) the value of 107,000 tons of marketed domestic grain was 169 million shillings. Then the domestic market moved some 550 million shillings worth of grain, 86 percent of the value of livestock exports, but a smaller percent of the total Somali livestock market.

a link between smallholders and "modern" marketing institutions. Most of these countries also have parastatal grain marketing agencies; but in only a few cases have they succeeded in marketing significant shares of locally-produced cereals.

2.31 There is also the lingering effect of the ADC-ENC monopolies. Somalia's smallholders have had no contact with "modern" marketing organizations other than ADC; and for most of its existence, ADC was more a grain procurement agency and seller of imported grain in urban areas than a smallholder-focussed marketing organization. ADC did sometimes acquire substantial shares of domestic production of maize and sorghum, 35-43 percent of sorghum in 1977-79 and over 50 percent of maize in 1971-72. But in most years, its percentage was below 30 percent for maize and below 20 percent for sorghum.<sup>1/</sup> Nevertheless, as Table 1 suggested, during the 1970s, ADC handled over half of maize and sorghum that was marketed.

2.32 The ADC experience has had several consequences that relate to the underdevelopment of Somalia's grain marketing institutions. Many of the private agents are "new". There remain of course many traders who operated in the 1960s. Some of these continued to buy and sell in small amounts throughout the 1970s. Many of these pre-ADC traders are re-appearing now. But it is striking to observe the youthfulness of the grain traders now in business -- at the wholesale level at least. Many of these men have been dealing in grain for only a few years.

2.33 As stressed in an earlier section, the grain marketing system is strongly dual in structure; with public and private marketing channels coexisting. What is relevant here, in considering market "underdevelopment" is that the dominant agricultural marketing organization of the 1970s, the public sector ADC, has been relatively inactive for the past two years at least, while the new private presence remains embryonic in

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<sup>1/</sup> The details are shown in Appendix Tables A-3-a and A-3-b.

structure and hesitant in action. The grain marketing system is in a transition in which the old institutions are not yet dead but the new ones are still immature.

2.34 A final factor derives from the large quantities of imports. Rural to urban grain flows - the traditional direction of most grain networks - are less strong in Somalia because of the dominant role of imports. As Table 1 showed, imported cereals are a major share of total consumption, on average almost 40 percent during 1979-82. Since most of the imported rice and wheat products are probably consumed in urban areas, or at least by non-rural people, domestic producers are left to supply a smaller share of urban consumption in Somalia than is commonly found elsewhere.

2.35 Partly because of the large imports, partly because of the recent dominance of ADC, large market-oriented producers and full-time specialized grain traders are few. Farmers produce primarily for their own consumption and informal transactions at village level. This is especially so for sorghum growers. There are only a few surplus producing Regions (Lower Shebelli, Lower Juba, the Bay Region, and a few others).<sup>1/</sup> Similarly, the retail level remains predominately the domain of very small-scale sellers (mostly women for maize and sorghum) while specialized grain traders are very few; although some wholesalers deal in grain as a major activity, most also handle coffee, tea, lumber and edible oil.

2.36 Finally, the characteristics of underdevelopment can be seen in the rudimentary physical facilities of many merchants and the limited range of services they provide. Thus there seems to be little storage by merchants, little provision of credit, and not much recent investment in physical structures.

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<sup>1/</sup> The surplus Regions are marked with an X in the "transfer-out" columns of Appendix Tables A-4-a through A-4-d where inter-District movements of maize and sorghum are shown.

D. Indicators of Market Efficiency and of Market Failure

2.37 Prominent structural elements in Somali markets support a strong presumption of competitiveness and efficiency in private grain markets. The first of these elements is the small size of most transactions in grain. This means that any given volume of trade can involve more actors than if individual transactions were more concentrated. It also means entry is easier for retailers, assemblers, and even wholesalers all of whom require less initial capital than they would need for entry into markets featuring larger average transactions.

2.38 Almost every market the Study Team visited contained numerous buyers and sellers. Where local wholesalers were few in number, retailers said they knew of alternative suppliers in other accessible locations.

2.39 The lack of specialization described in the first section of this Report has involved an extraordinary flexibility of buyers and sellers based at different levels of the marketing system but operating frequently at levels above or below their base. Thus, at one extreme, both Mogadishu wholesalers and retailers sometimes bypass available suppliers and go directly to villages and farmers for their stocks. At the other extreme the rural assemblers and even the farmers sometimes bypass their usual buyers and carry their stocks to the cities for sale. The threat of being bypassed appears to be present for most participants in the system as an inducement to efficient operation and to submission to competitive pricing.

2.40 Retailers must pay Local Government tax collectors 2-5 shillings a day for ground space in the central markets (in some places, more on Fridays) and 6-8 shillings a day for operation of a shop selling grain and many other commodities. Each wholesaler must pay 1,000 to 1,500 shillings annually to Local Government for a license.<sup>1/</sup> Wholesale licenses and access to retail markets

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<sup>1/</sup> Wholesale licenses authorize general wholesaling; they never restrict the licensee to trade in just grain or in any other limited product group.

appear to be available to anyone with the capital needed to enter. The Study Team identified no residency or caste or other rules deterring prospective entrants. The retailers and wholesalers interviewed by the Study Team reported a variety of backgrounds that suggest market entry can follow from many different kinds of preparation. Many of the grain wholesalers were in that business 15 years ago then were forced out by ADC and ENC but have now come back. Others have returned, within the past two years, from the Gulf states or have given up teaching, or moved recently from other wholesaling "because we heard that the private grain trade was now a good business to enter." This openness represents a further incentive to incumbent marketers to be efficient and to submit to competitive pricing.

2.41 One other modest indicator of market competitiveness is the size of retail and wholesale markups. All over the country, retailers repeated that their markup on maize and sorghum was usually one shilling but sometimes two shillings on a purchase price of twenty shillings. In Mogadishu, in December 1983, the reported markup between wholesale buying and retail selling prices ranged from 10 percent on spaghetti and 15 percent on rice, to 30 percent on flour, maize, and sorghum (for more on this point, see paragraph 2.07 below).

#### Indicators of market failure.

2.42 Yet Somali grain markets are clearly not perfectly competitive even in the absence of legislative controls. In particular, resource mobility and information flows are constrained.

2.43 Access to transportation was never cited as a problem for traders. Petrol droughts occur, and loaded trucks break down, but all the private grain traders interviewed said they had no trouble getting transport at "reasonable" rates. Yet the Somali highway system leaves many villages inaccessible to trucks for part or for all of the year. Farmers in these locations do use camels to export grain, two quintals per camel, but their options (and their transport costs) are much less favorable than for villages reached easily by road.

2.44 The modest highway system inhibits both the movement of commodities and the flow of information. The absence of newspapers is also a factor constraining the flow of information. One can travel for weeks in the Regions and in Mogadishu and never see any newspapers. The national radio service does reach most villages, but it does not now provide farmers with any information about private grain markets. These circumstances leave word-of-mouth as the only source of information about price changes in "other" areas. Evidence on this point, as on many others, is very limited, but field inquiries suggest that farmers are not well informed about price changes outside their immediate area. This is not a matter of complete ignorance but only of lags in the communication from village to village of information about price changes. To the extent that this is true, the individuals who first learn of price changes are able to benefit disproportionately from them.

2.45 The Government is already making substantial new efforts to improve various parts of the information base. A system of crop size prediction is being put in place with the assistance of the German Government -- an early warning system. The price data collection capacity of the Ministry of Planning is being reinforced, with Swedish Government assistance. But data collection remains the area of greatest weakness and greatest need: except for recent efforts by the National Extension Service (and reported in Appendix Table B-4), prices actually prevailing in markets other than Mogadishu are not systematically observed. Yet these are the most important single elements of information required for improved market performances, and they are the best single indicator of crop sizes, actual and expected.

2.46 A further weakness of the present agricultural marketing system is the scarcity of large-scale wholesalers or retailers that operate in different markets and that both generate and use nation-wide market information. Such organizations play important roles as integrating factors in more advanced marketing systems. In Somalia, a government agency participating as a competitor in the market could begin to fill this role by providing frequent public reports on prices and quantities involved in its own transactions.

E. The Role of Reserve Grain Stocks

2.47 The last non-price characteristic considered here is the year-to-year role of private and of public stocks of grain. When asked, "how much do you have in your bakkar?" most farmers answer "enough for one year" or "enough for two years". Assuming (after calculations shown in paragraph 2.18 above) that the present farm population is 1,060,000 people and that they eat an average of 175 kgs of grain each year, they would have 185,000 tons stored underground for a one year supply and 370,000 tons for two years. In fact, no one knows how much is stored, though at present District officers and farmers interviewed agreed that at least in the Lower Shebelli, the bakkars are full. But farmers everywhere in Somalia like to boast that they store their grain so it remains edible after 5, 10 or even more years in underground storage. So even allowing for exaggeration, farmers seem to have enough experience with long term storage to justify an assumption that the average amount stored in the villages after a good harvest is more than one year's supply.

2.48 The Study Team is unable to make any guesses at amounts in the stores of private grain traders. Most, when asked, said that attempts to buy cheap, store, and sell dear were far too risky to try and that foreigners who thought it a good idea should try it using their own money. Traders in the Bay Region said they tried to keep their stocks small because ADC might induce them to sell to ADC at official buying prices. Most traders do seem to try to turn over grain inventories rapidly.

2.49 Government stores were small at the time of the Team's visit. On 5 December, ENC had 3,000 tons of rice in its stores and no flour. On 30 June 1983, ADC reported 5,712 tons of maize and 18,167 tons of sorghum in its stores. By December 1983, ADC had borrowed 1,400 tons of maize from the World Food Program in order to return the Government's grain mill to operation. As Table 6 shows, ADC has, in the past, sometimes ended the year with very large inventories. Because of large concessional imports

Table 6

ADC Inventories of Maize  
and of  
Red Sorghum, Selected Years 1977-82  
(Thousands of Metric Tons on December 31)

Calendar Year	Maize	Red Sorghum
1977	25	27
1978	13	39
1980	9	2
1981	47	3
1982	16	18

Source: ADC Inventory records. These are not quite consistent with the calculations of stock-as-residuals in Statistical Appendix Tables A-3-a and A-3-b.

during the year, maize inventories were especially large at the end of 1981 and were still not drawn down at the end of 1982. The drawdown of that inventory during 1982 and its elimination by October 1983 may provide much of the explanation for the stability of grain prices throughout 1982 and their rise in the second half of 1983. If this is the case, the 1982 results may be a tribute to ADC's ability to manage release of a reserve stock. In any case, Government grain inventories were small in December 1983. The typical ADC warehouse, even in the Bay Region, had 200 50 Kilogram sacks piled in a space ample for 80,000 or more.

III. DESCRIPTION OF THE PRICE PERFORMANCE  
OF THE MARKETING SYSTEM

A. Pricing Domestic Production

Official ADC buying and selling prices.

3.01 When buying and when selling maize and sorghum (and rice and sesame), ADC has always practiced panterritorial pricing. When it began operations in 1971, ADC appears to have set prices near market levels. But ADC applications for price changes have had to be submitted to a Committee consisting of the Ministers of Agriculture, Commerce, Finance, and Planning, the Presidents of the Commercial Bank and the Central Bank, and the Chief of the Tribune Police. In recent years, the Committee rejected several ADC requests for price increases so the official prices have fallen far behind market prices moved up by inflation.

3.02 Table 7 shows how this gap developed for sorghum prices after 1977. The Table shows official ADC buying prices for selected years since 1973 then deflates them by the Mogadishu CPI to show a real price series (and a real price index with a 1973 base). These calculations show how the ADC buying price kept up with inflation through 1977 but fell increasingly behind thereafter.<sup>1/</sup> By the end of the decade, sorghum (and maize) producers who sold to ADC were receiving about a quarter less in real terms for each quintal than they had received in 1973. By 1982, the real returns were off 48 percent a quintal. Table 7 also shows that in 1983 the observed market price (as distinct from the official price) of 650 shillings represented a real 1973 price of 75.9 shillings, up 80.7 percent even assuming 1983 price inflation of 24 percent. Finally, as Table 7 also shows, assuming the 1983 inflation of 24 percent, a 1983 price of 325 shillings per quintal would provide purchasing power parity with the 1973 price of 42 shillings.

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<sup>1/</sup> Appendix Table B-8 provides comparable figures for each year, 1973-1983, for red sorghum and for white maize.

Table 1

Nominal and "Real" Price of Red Sorghum:  
Selected Years, 1973-1983, and Parity Price, 1983

	1973	1977	1978	1979	1981	1982	1983	
							If 24% inflation	Then Parity
ADC buying price:	42 sh	75	75	75 sh	150 sh	150 sh	650 sh	325 sh
Mogadishu CPI:	100.1	178.2	196.1	196.1	558.3	690.6	856.3	856.3
Real price:	42 sh	42.1	38.2	30.9 sh	26.9sh	21.7sh	75.9sh	42 sh
Real price index:	100.0	100.2	91.1	73.7	63.9	51.7	180.7	100.0

Source: Appendix Table B-8

3.03 But the Mogadishu consumer price index is an imperfect benchmark of comparison for prices offered to farmers in the country. Observers of Somali agricultural policy frequently try to use the available price series data to measure changes over time in producer terms of trade. Different concepts are defined - "real producer prices" in some cases, "indicators of profitability for major crops" in others.<sup>1/</sup> Given the sparsity of information these data tell us something. But as others know, who have made these efforts, many uncertainties are involved, and it is worth spelling these out briefly. The Statistical Appendix Tables B-1 and B-5 present much of the available price data: the official ADC buying prices for major crops and the consumer price index for Mogadishu. The Statistical Appendix Table A-1 presents also production trends. In principle, one should be able to use these data to measure changes in real producer prices, and in the real terms of trade for major crops, both the commodity terms of trade (the relationship of the prices farmers received for

<sup>1/</sup> IBRD, Somalia Policy Measures for Rehabilitation and Growth, 6 May 1983, Table 7.6, and Boston University, African Studies Center, Somalia: a Social and Institutional Profile, March 1983, Table 6, p. III-14.

their marketed crops and the prices of the things they bought.) and the income terms of trade (the relationship between money receipts for sales of major crops and the prices of the things farmers bought). In fact, the data are so uncertain that they tell us only a little about these things. First, the production series is extremely unreliable and nothing firm is known about volumes marketed, so estimates of total revenue are extremely untrustworthy. Second, use of the Mogadishu Consumer Price Index to deflate the normal price series is defective since the Mogadishu consumption pattern is hardly relevant for most farmers; it has a food weighting of 60 percent and most farmers are not net food buyers. But since the Mogadishu price index is the only price index in existence for Somalia, it is used here as the only available estimate of the progress of inflation in Somalia.

3.04 In contrast with the pricing policies of ENC, described below, ADC prices its sales of concessional maize imports without any reference to c.i.f. values. ADC has always sold all its imported maize (including its occasional relatively high-priced commercial imports) at its prevailing official selling prices for domestic maize. Further, though domestic white maize generally commands a premium of 20 percent or more over imported yellow maize, ADC has always sold both for the same price.

3.05 The spread between ADC's buying and selling prices per quintal has always represented that Agency's estimates of its operating costs per quintal, but this estimate has never included the salaries of its staff of between 900 and 1,000. If the staff's salaries average 9,600 shillings a year, the total salary bill is some 9.6 million shillings, a cost ADC has apparently never attempted to cover out of receipts.

#### Market prices of domestic production.

3.06 The only published record the Study Team could find of past grain prices is that contained in the components of the Mogadishu Consumer price index. For years, these prices have been collected each month by the same man. He asks one price on each time but does not buy anything. Since he is well known in the markets, the retailers might conspire to misinform him if, for example, they wanted to give the impression that their prices were not so

far above official price ceilings as they in fact were. However, the reported data do give the appearance of month-to-month consistency. Monthly prices for white (domestic) maize, yellow (imported) maize (prices not collected in 1983), white sorghum, red sorghum, rice, flour, and domestic spaghetti for the period January 1981 through August 1983 are shown in the Statistical Appendix Table B-6. They are also shown, for particular grain and grain products in the Statistical Appendix Graphs 1 through 7 for the same period. No monthly figures could be found for earlier years. In 1981 maize, sorghum, flour and pasta prices all peaked at mid-year and stayed high. Throughout 1982, maize and sorghum prices were stable, rice prices fell, and flour prices rose. During 1983, all prices have been rising.

3.07 The Team collected statistics from three sources on current prices in private grain markets. First, we bought maize and sorghum from retailers in 11 markets outside Mogadishu then weighed the purchases. This weighing was necessary because maize and sorghum are sold by volume, and the units differ from market to market. Second, the Team obtained retail price information from field extension agents of the Agricultural Extension Service who began, in August 1983, asking selling prices and estimating weights of the units in retail markets in the Districts where the agents work. Their data suffer because the agents neither buy nor weigh. Finally, on one day in early December, one member of the Study Team visited six Mogadishu markets and asked retail and wholesale buying and selling prices for white and yellow maize, white and red sorghum, flour, rice, and imported and domestic spaghetti. No purchases were made and no quantities were weighed.

3.08 The data from the grain bought and weighed confirms the sharp rise in grain prices between 1982 and late 1983. The data also suggest, as one would expect, that prices are lower the farther the market from Mogadishu (and, perhaps from Kismayu) and the lower the quality of the grain.<sup>1/</sup>

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<sup>1/</sup>The detailed statistics are shown in Appendix Table B-5.

3.09 The Extension Agents' price data are very close to those of the Team's purchases, and they show several other relationships; the price premium of 10-20 percent for white over red sorghum, the sharp fall -- if Janale was typical -- in the price of maize after the August Gu harvest, and the rise in all prices between August and November.<sup>1/</sup>

3.10 The retail and wholesale prices collected in six Mogadishu markets on one day by the Study Team member reconfirm the relatively high level of grain prices in December, and they provide a basis for estimates of retail and of wholesale markups. Based on this data the markups between whole sale buying and retail selling prices are about 10 percent on spaghetti, 15 percent on rice, and up to 30 percent on the other products.<sup>2/</sup> These figures are not inconsistent with the maize and sorghum retailers reports, noted earlier, that their usual markup is 5-10 percent.

Comparisons between official and market retail prices.

3.11 At almost all times in recent years the open market retail prices of maize and sorghum have been substantially higher than ADC Selling prices even though ADC's official selling prices were intended by Government to be the prices to consumers. The most extensive comparison available is between official selling prices and the Mogadishu consumer price index over the period, January 1981 through August 1983. Figures 1-4 show Mogadishu prices of white domestic maize, yellow imported maize, white sorghum and red sorghum for each month of that 32 month period.<sup>3/</sup> The figures also show the official selling prices for these commodities during this period. Table 8 shows the size of the excess of market prices over official selling prices in August of each year, 1981, 1982, and 1983. Table 8 reports the difference both in shillings and as a percent of the official price for white maize, red sorghum, white rice, and domestically produced spaghetti (more below on the latter two commodities).

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<sup>1/</sup>The detailed statistics are shown in Appendix Table B-4.

<sup>2/</sup>The detailed data are presented in Statistical Appendix Tables B-7-a through B-7-h.

<sup>3/</sup>Except that no data were collected during 1983 for yellow maize.

Figure 1: Somalia; Monthly Retail Price of Domestic Maize in Mogadishu Compared with the ADC Selling Price.  
January 1981 - August 1983

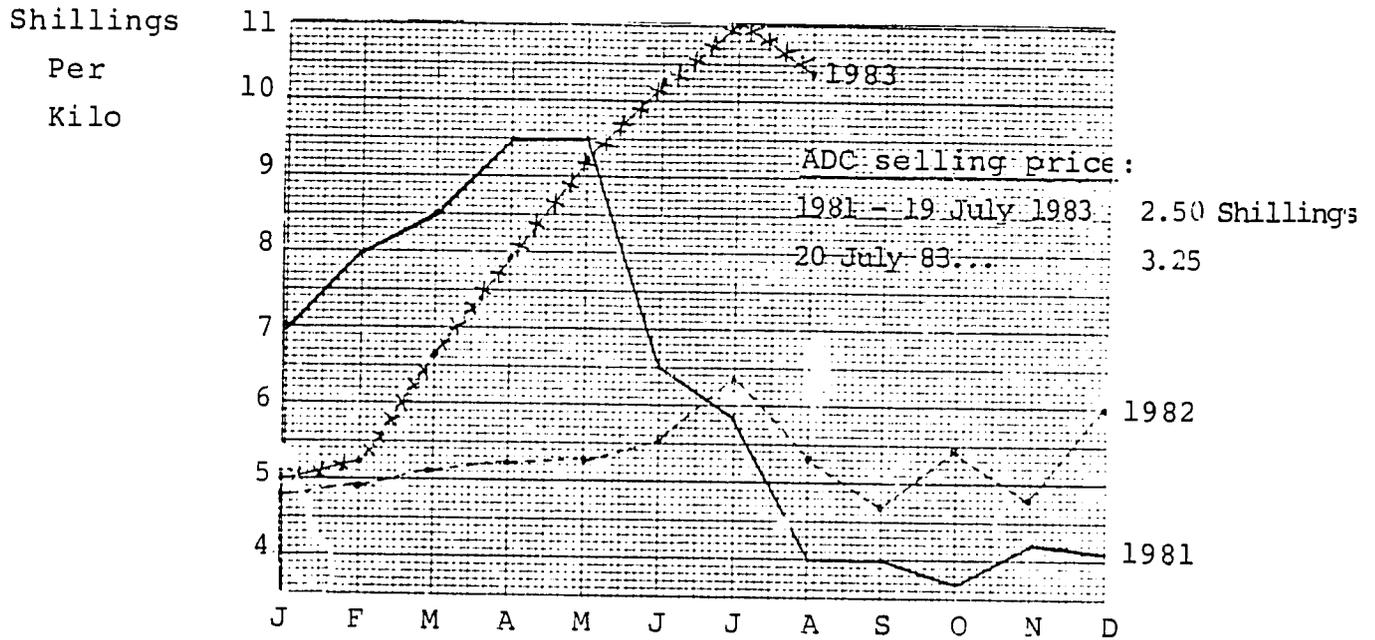


Figure 2: Somalia; Monthly Retail Price of Imported Maize in Mogadishu Compared with the ADC Selling Price.  
January 1981 - December 1982

(No data collected for 1983)

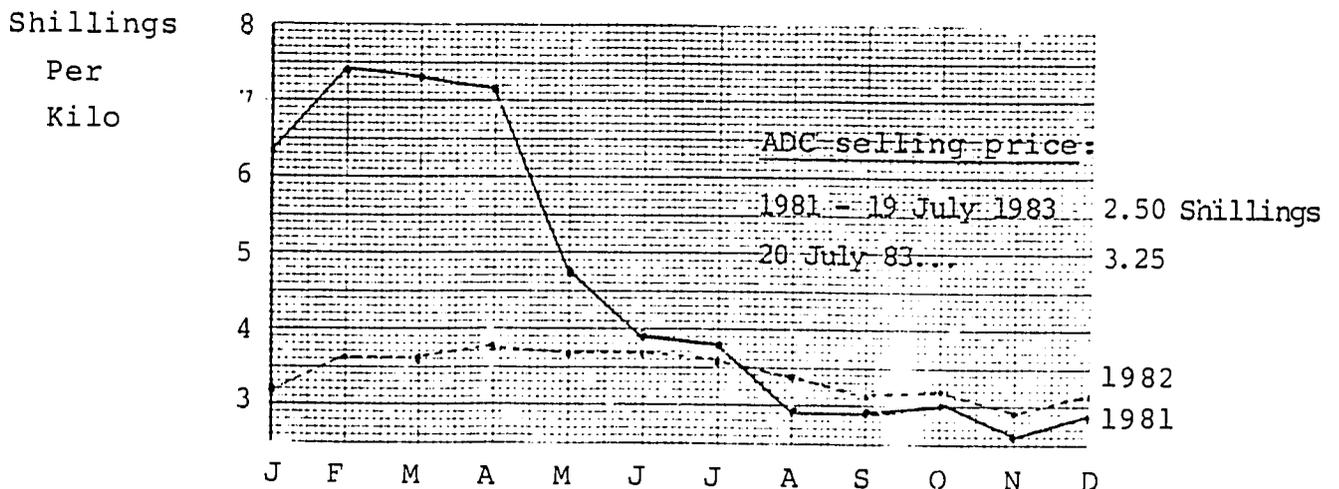
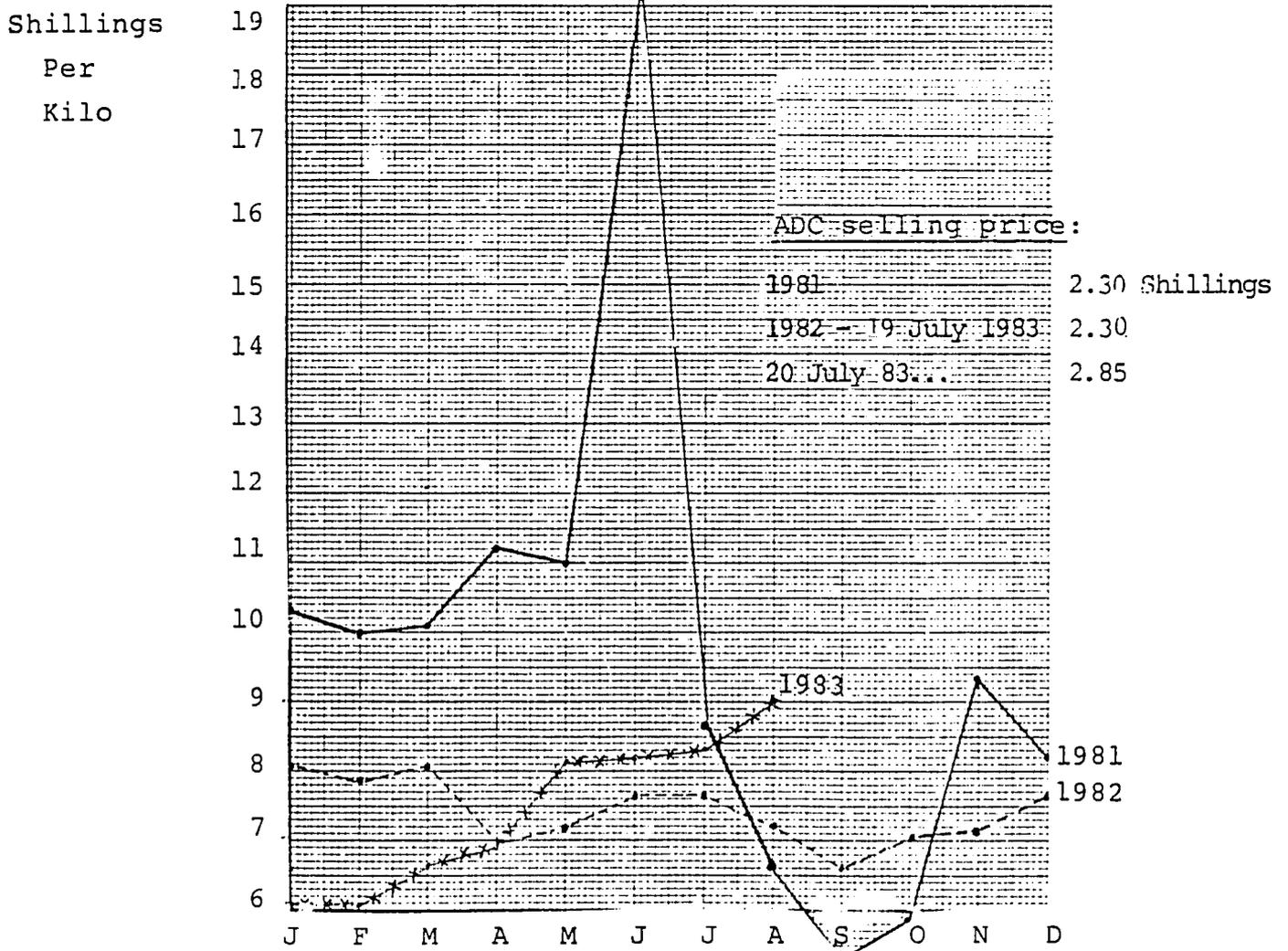


Figure 3: Somalia: Monthly Retail Price of White Sorghum in Mogadishu Compared with the ADC Selling Price.

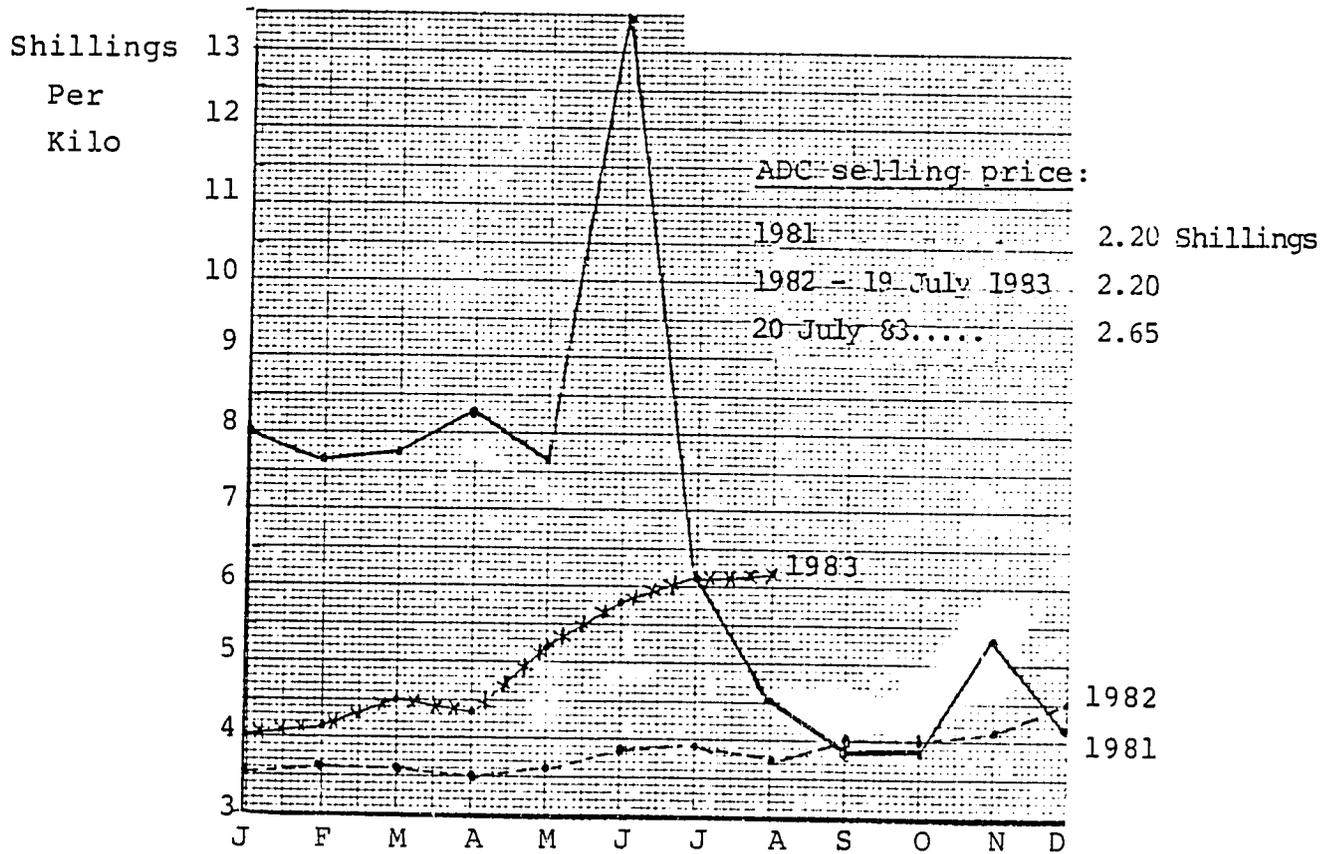
January 1981 - August 1983



Source: Statistical Appendix Table B-4.

Figure 4: Somalia: Monthly Retail Price of Red Sorghum in Mogadishu Compared with the ADC Selling Price.

January 1981 - August 1983



Source: Statistical Appendix Table B-4.

Table 8: Open Market Retail and Official Selling Prices  
for Cereals, Mogadishu: 1981 - 1983  
( Shillings per Kilo)

Commodity	1981	1982	1983
		August	
<u>White maize</u>			
Retail price:	4.13 sh	5.35 sh	10.45 sh
ADC selling price:	2.50 sh	2.50 sh	3.25 sh
Excess of market over ADC price:			
In shillings:	1.63	1.85	7.20 sh
As % of ADC price:	65%	74%	222%
<u>Red sorghum</u>			
Retail price:	4.59 sh	3.73 sh	6.15 sh
ADC selling price:	2.20 sh	2.20 sh	2.65 sh
Excess of market over ADC price:			
In shillings:	2.39 sh	1.53 sh	3.50 sh
As % of ADC price:	109%	70%	132%
<u>White rice</u>			
Retail price:	15.00 sh	10.67 sh	16.10 sh
ENC selling price:	4.95 sh	8.39 sh	9.61 sh
Excess market over ENC price:			
In shillings:	10.05 sh	2.28 sh	6.49 sh
As % of ENC price:	203%	27%	68%
<u>Domestic spaghetti</u>			
Retail price:	11.22 sh	13-18 sh	24.67 sh
Pasta factory price:	7.00 sh	7.00 sh	9.25 sh
Excess market over factory price:			
In shillings:	4.22 sh	6-11 sh	15.42 sh
As % of factory price:	60%	86-157%	165%

Source: Statistical Appendix Tables E-1, E-2, E-3 and E-6.

Throughout recent years, the Government has continued price policies intended to lower prices to urban consumers. But the prices actually paid by consumers have remained above the official prices so that for nearly all consumers, the official prices have been irrelevant. The only exceptions have been the families able to buy from Local Government or ADC and those able to buy from Government organizations such as the army and police, that pass on low prices. All ADC maize and sorghum passing to the public through wholesalers and retailers has been sold at market prices with any excess of markup or marketing-transportation costs going to the traders as unearned income.<sup>1/</sup>

Comparisons with ADC buying prices.

3.12 At the other end of ADC activities, its buying prices have been kept persistently below market prices at least since the late 1970s. The difficulty here is that no price series is available for prices paid to farmers in private markets. However, the price to farmers as a percent of retail prices can be estimated. The Survey Team collected data on Mogadishu retail prices on maize and sorghum in December 1983 and on the prices paid to farmers by Mogadishu wholesalers.<sup>2/</sup> The rough rule is that farmers near Mogadishu were paid about 77 percent of the Mogadishu retail prices. Table 9 compares ADC buying prices with an estimated producer price, the estimate being 77 percent of Mogadishu retail prices for white maize and red sorghum for each of the three years 1977, 1981, and 1982. Two points emerge: first, the persistent gap between the estimated open market producer prices and the ADC buying prices and, second, the great increase in that gap between 1977 and 1981-1982. In 1977 private trader buying prices were some 25 percent above ADC buying prices. During 1981 and 1982 the excess was in the range of 100 to 300 percent.

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<sup>1/</sup>Annex IV describes Government's creation of unearned income.

<sup>2/</sup>The details appear in Appendix Tables B-7-a through B-7-d. The prices wholesalers said they paid to farmers were consistent with farmer's reports to the Team of prices they were receiving in November and December.

3.13 Table 9 also shows the fall in ADC purchases of maize and sorghum from some 19 and 42 percent of production, respectively, in 1977 to some 1 and 3 percent, respectively in 1982. The figures of Table 8 showed how much more incentive farm families had to evade ADC in the 1980s than in the mid 1970s. Table 9 shows how much evasion of ADC grew between the mid-1970s and the 1980s.

B. Pricing Imported Rice, Flour and Wheat

3.14 ENC bases selling prices for rice and for flour on c.i.f. values plus the Agency's calculated overhead. But it does not change price with every imported shipment. The rate last approved remains in force until a new one is approved. ENC applies for price changes through its parent, the Ministry of Commerce, to the same inter-Ministerial committee that has authority over ADC buying and selling prices. But while price changes are infrequent, the Agency is protected against deficits. ENC handles only concessional imports and marks them up enough to cover its own costs, including staff salaries. It pays the Ministry of Finance at the rate used to calculate ENC's current selling prices. So, since its selling prices and its payments to the Finance Ministry change only together while ENC keep the difference between them wide enough to cover its cost, it is protected against cost overruns.

3.15 The pasta factory processes all imported concessional wheat. Twenty percent of the processed wheat becomes bran, 11 percent flour, and 9 percent semolina. The factory sells bran and flour to the gate and converts all the semolina into spaghetti and macaroni. These two pasta products use only the single input semolina plus water that is promptly baked out of the mix. The factory pays the Ministry of Finance for the wheat at the c.i.f. prices calculated by the Finance Ministry using the official exchange rate. The factory sells pasta at prices determined by the factory's parent, the Somali Development Bank, which sets prices after receiving recommendations from the factory.

Table 9: Official, Open Market Retail, and Estimated  
 Producer Prices for White Maize and Red Sorghum,  
 1977, 1981, 1982  
 (Shillings per Kilo.)

	Year					
	1977		1981		1983	
	Maize	<u>Sorghum</u>	Maize	<u>Sorghum</u>	Maize	<u>Sorghum</u>
<u>Prices:</u>						
Open market retail price (Mogadishu):	1.24	1.24	8-4	8-13-4	5-6	4.5-5.5
Estimated open market wholesale price (77 % of retail):*	.95	.95	6.2-3.1	6.2-3.1	3.8-4.6	3.5-4.2
Official ADC price:	.75	.75	1.8	1.5	1.8	1.5
Premium of private wholesale over official price:	27%	27%	244-172%	313-107%	111-156%	133-180%
<u>Quantity:</u>						
Percent of production bought by ADC:	19%	42%	4%	11%	1%	3%

\* Assumes a 30% markup between wholesale buying and retail selling price.

Source: Appendix Tables B-6, B-1, and A-3a and A-3b.

3.16 ENC estimates that three-fourths of its sales are to Government agencies. The pasta factory management has not estimated portion sold to Government agencies but believes at least half of its sales are intragovernmental (ADC had no estimates of portion of sales to Government agencies).

Comparisons between official and market prices.

3.17 During nearly every month in recent years, ENC and -- most especially -- pasta factory prices have been below current market prices. As for maize and sorghum, Mogadishu's consumer price index is the only basis for a comparison over time of official with open market prices. Figures 5 through 7 show rice, flour, and domestic spaghetti prices for each month from January 1981 through August 1983. Figures 5 through 7 also report the official ENC and pasta factory selling prices (the latter has sold its flour only 34 to 67 percent of ENC's price for flour).

3.18 Table 8 compares ENC's selling price of rice and the pasta factory's selling prices of spaghetti with Mogadishu retail prices August 1981, 1982 and 1983, throughout these months, the excess of retail prices over the ENC and pasta factory prices has been large in the sense that, at 60 to 200 percent, it has exceeded the 20 to 30 percent markup on flour and the 10 to 15 percent markup on domestic spaghetti that characterized Mogadishu markets in December 1983.<sup>1/</sup>

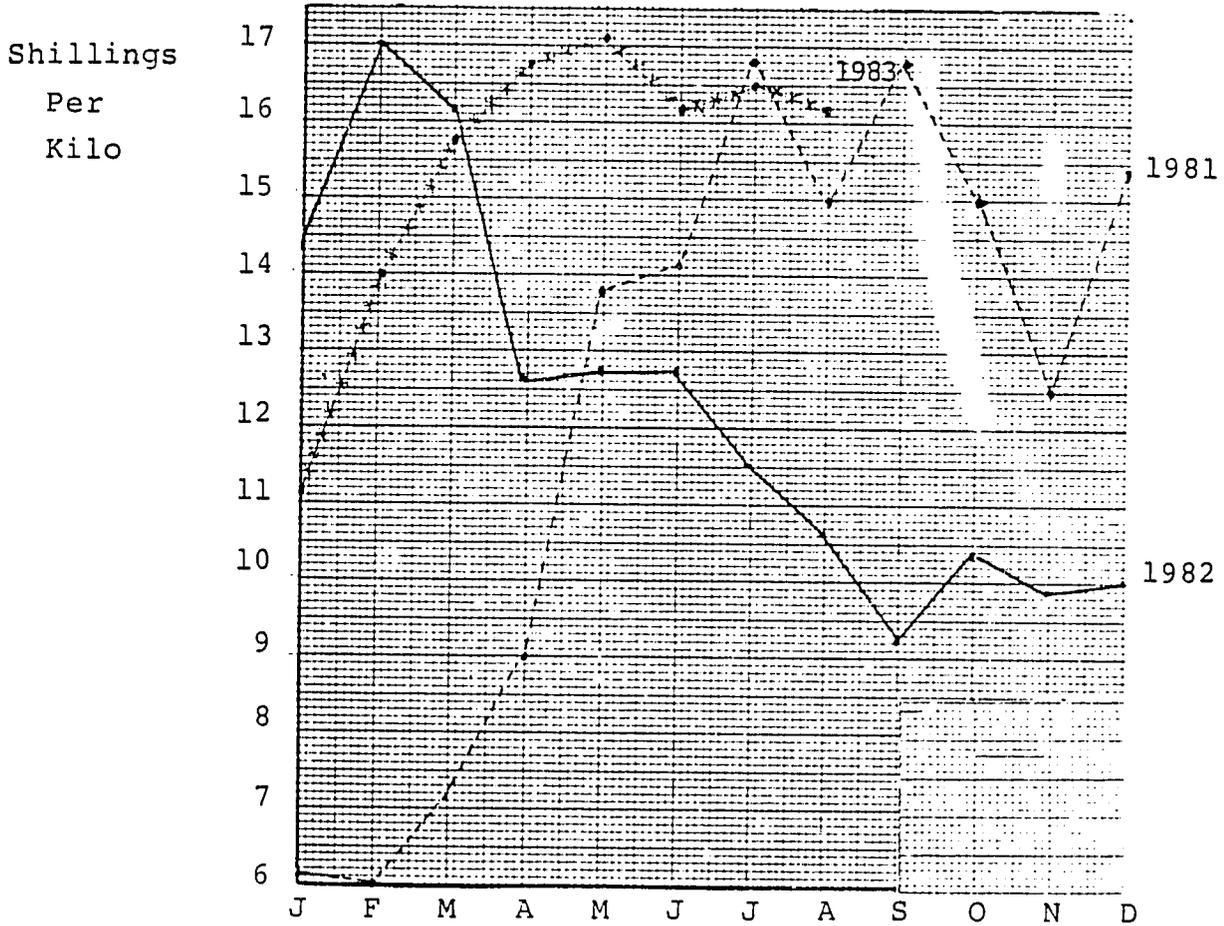
<sup>1/</sup> The details are shown in Appendix Tables B-7-e and B-7-f.

Figure 5: Somalia: Monthly Retail Price of White Rice in Mogadishu Compared with ENC Selling Prices

January 1981 - August 1983

ENC selling price:

1981	4.95 shillings
1982	8.39
June 1983	9.61



Source: Statistical Appendix Table B-4.

Figure 6: Somalia: Monthly Retail Price of Flour in Mogadishu Compared with ENC and with Pasta Factory Selling Prices

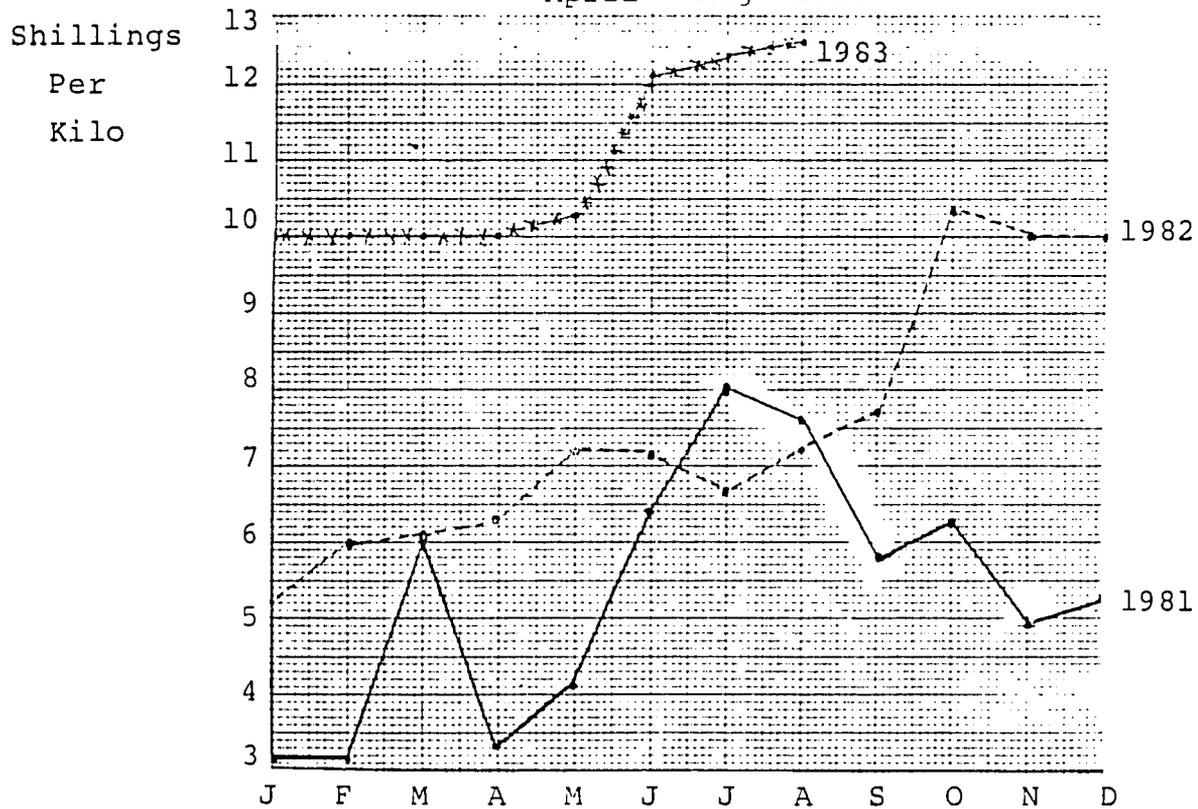
January 1981 - August 1983

ENC selling price:

1981	3.73 shillings
Oct. 1982	7.26
Jan. 1983	8.84

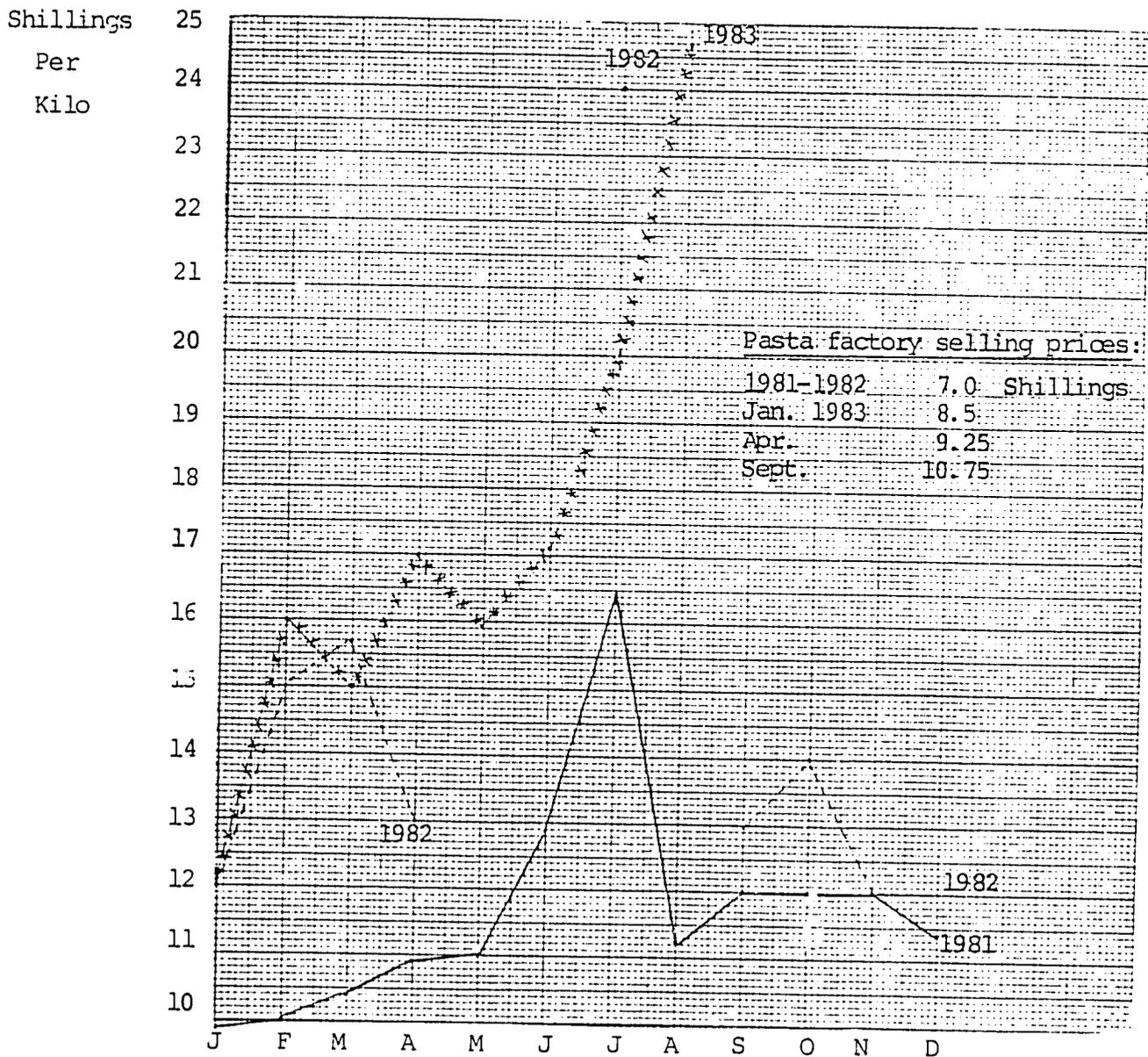
Pasta factory selling price:

1981 - Mar. 1983	2.50 shillings
April - Aug. 1983	4.50



Source: Statistical Appendix Table B-4.

Figure 7: Somalia: Monthly Retail Price of Spaghetti in Mogadishu Compared with the Pasta Factory Selling Prices. January 1981 - August 1983



Source: Statistical Appendix Table B-4.

### C. Concessional Imports and Domestic Grain Prices

3.19 According to the estimates presented in Table 2 in paragraph 2.16, over the four years, 1979-82, concessional grain imports accounted for between 18 and 34 percent of all grain consumed in Somalia. According to the estimates of domestic marketings presented in paragraph 2.23, concessional grain imports accounted for a third to a half of all grain marketed in Somalia over the years 1979-82. So far as can be determined, no one has attempted to evaluate the effects of those concessional imports on domestic grain prices. If all concessional grain imports were to end next year then, presumably, domestic grain prices would rise but by how much, no one has attempted to guess.<sup>1/</sup> But no large-scale change seems likely soon in the amount of food aid flowing into Somalia. Therefore, that flow is sure to continue to be a dominant force in the determination of all domestic open market prices.

### D. Seasonal Price Fluctuations

3.20 The usual concerns of Governments, regarding price fluctuations are the injuries to farmers of price declines at harvest times and the injuries to consumers of price rises in the weeks just before harvests. Little information exists to show the extent to which these fluctuations occur in Somalia. The information that is available is from Mogadishu's consumer price index for the period January 1981 through August 1983. As already reported, these price movements are shown in detail in Figures 1 through 7. For maize and sorghum, they show sharp price increases before the 1981 Gu harvests, but they show only negligible price fluctuations between the 1981 Der, 1982 Gu, and 1982 Der harvests. During 1983, prices have risen persistently, though according to the extension agents' figures of Appendix Table B-6, maize prices did fall sharply after the 1983 Gu harvest. The fluctuations in rice and wheat prices have little

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<sup>1/</sup> Annex IV analyzes the possible effects of Somalia concessional grain imports.

to do with domestic harvests. Both rose throughout 1981; flour prices continued to rise through 1982 and 1983. Rice prices fell dramatically during 1982 then rose just as dramatically during 1983. It is not clear why there seems to be such little correlation between prices of different grains and between harvests and interharvest intervals. No certain answer is possible given available evidence. But one possible answer is that the fluctuating flows of concessional imports have had effects that have sometimes, perhaps often, swamped the effects of harvests of domestic production. If true, the implication is that in the future the size of foreign food aid, the timing of its arrival -- which may always be very lumpy -- and the program of Government disposition of food aid will continue to play a very influential role in the determination of open market grain prices.

IV. DEFICIENCIES IN PUBLIC POLICY

A. Legal Barriers to Private Trade

4.01 The greatest single problem in cereals marketing is the law that forbids the purchase, sale, and distribution of maize and sorghum by private persons for commercial purposes. Although the law is widely circumvented, its existence inhibits market development. In some regions, the law is said to have been used to keep private traders out of local markets at harvest time. If true, competition has been reduced when it is most needed so that prices have been lower at harvest time than they otherwise would have been. In the sorghum growing Regions especially, farmers continue to sell thousands of tons of grain to ADC at prices below market levels. Why do they do this? In some Regions, the law is said to be used still to compel farmers to sell a portion of their output to ADC. In other Regions, as noted already in paragraph 2.14, if farmers choose to sell any grain they are supposed to sell only to ADC. To avoid the effects of the law and the low prices ADC has paid in recent years, farmers say they have moved resources away from grain production and into livestock, and fruits and vegetables, and that, for the same reasons some labor has moved out of the country. The farmers also say that if the law were further liberalized, some laborers would return and more resources would move into grain growing.

4.02 The fact -- or, at least, the widespread rumors -- that some ADC offices sometimes force traders -- as distinct from farmers -- to sell to ADC at official buying prices is a barrier to inventory building and to long term investment by traders. Even if this charge is not true, many people appeared to the Team to believe it and to be influenced by it. To the extent that the existing law discourages longer-term commitments and product specialization by traders, it prevents the fuller development of private marketing institutions and competence.

4.03 This problem of an atavistic law inhibiting implementation of changes in agricultural marketing policies is by no means unique to Somalia. It is in fact normal in marketing liberalization efforts; countries like Guinea, Mali, and Niger have all encountered obstacles to the spread of change. But in Somalia the problem is especially difficult because, as explained in paragraph 2.13, the legal framework has been only partially changed.

B. Deficiencies in the System of Public Institutions

4.04 The earlier discussions have noted how reductions in the roles of ADC and of ENC have left both with redundant personnel and storage facilities. In fact, both seem to have had excessive storage space even when they both dominated their markets.

4.05 Although the Government is now in the process of improving its facilities for collecting statistics, concerns other than agricultural pricing are guiding that process (e.g., preparation for the 1985 population census). Since price information plays a key role in the operation of efficient markets, the absence of any institutional arrangements for data collection regarding rural grain prices is a serious defect of the Somali grain marketing system.

4.06 Given its original objectives of protecting and encouraging farmers and of protecting consumers, ADC must be judged a failure, for it has achieved neither of those objectives. The next section in this report is devoted entirely to the deficiencies in public price policy.

4.07 Previous paragraphs have dealt with organizational problems in the grain agencies. But problems also exist in the procedures underlying the making of policies respecting grain markets. As in most governments, procedures and institutions for decision-making in agricultural price policy are not well-developed. The Team had difficulty ascertaining the administrative procedures and economic principles that determine Somali public policy decisions in this

area. So far as we could determine, ADC, ENC, the pasta factory, and the relevant ministries have had difficulty systematizing and coordinating their policy-making. Food aid policies, for example, seem to be made independently of agricultural policy decisions; food aid is the responsibility of the Finance Minister (as are wheat and flour imports); pricing decisions are made for individual products without reference to the prices of other products (in the extreme case, ENC and the pasta factory are instructed to sell flour at different prices). We could find no statement or law guiding a national grain reserve policy.

### C. Deficiencies in Government Pricing Policies

Official buying prices have been too low.

4.08 Cereal price policies in recent years have been deficient in several respects. Official ADC buying prices have been fixed at too low a level for maize, sorghum, and sesame. Paragraphs 2.11-2.14 and 2.17-2.18 have made the point that official prices have been below private market prices. More important in terms of incentives, official prices have been below costs of production in all regions and using any of the available technologies. These cost-of-production estimates are of course heavily dependent on the assumption made about labor costs. But for many years, according to the available studies, the production of these grains for sale to ADC has not been economically attractive for farmers. According to one study in the late 1970s for example, the average cost of production of sorghum on 6 farms in the Bay region was 85-92 shillings per quintal, while the official producer price at the time was 75 sh/q. In the Hargeisa region, costs were much higher, 129-178 sh/q., when the ADC buying price was 110 sh/q.<sup>1/</sup>

1/ Burgio, G.L. Castellani, and A. Mazzali and M.N. Dahir, "Aspetto statistico-economici della coltivazione del sorgho in Somalia," Study i Ricerche, Universita Nazionale Somala Facolta di Agraria, Quederma No. 3. The value of family labor was estimated by using two assumptions - one that the relevant wage was the cost of outside paid labor, the other at 2/3 that cost.

4.09 The "Farm Management Data Book" and survey information from the Ministry of Agriculture indicate that similar circumstances persist through the 1980s. The data are presented in Annex VIII of this report. They show sorghum costs, though highly variable regionally, averaging about 300 sh/q in 1983, while maize costs were in the 400 sh/q range on the majority of farms studied. This compares with official ADC buying prices of 150 sh/q for red sorghum and 180 sh/q for maize before 20 July 1983 and of 160 sh/q and 220 sh/q after that date. The gap remains large even with very low values inputed for labor cost.

4.10 Another comparative measure of prices in Somalia is import parity. Table 10 first calculates import parities then compares the shilling prices of maize and of sorghum imported from the United States with ADC buying prices and early December wholesale prices in Mogadishu. Since several rates for the shilling now coexist, Table 10 represents the import parity values for the three different exchange rates of 17.38 sh, of 35 sh, and of 51 sh to the U.S. dollar. At the official exchange rate, import parities were about double ADC buying prices. But at 35 shillings to the dollar, import parities were three to four times ADC buying prices and were above the high December wholesale prices in Mogadishu. At 51 shillings to the dollar, import parities would be more than 50 percent above December wholesale prices. So by international standards, ADC buying prices are very low; and, depending on the exchange rate used for comparisons, even the late 1983 retail prices that were widely judged to be extraordinarily high can be regarded as modest.

4.11 The low official buying prices affect the incentive to adopt new techniques -- in addition to the other implications. Thus in the Bay Region rural development project, the adoption by farmers of the basic recommendations -- the so-called Stage 1 technical package -- would demand 9 additional days of peak season labor per hectare. The additional production is estimated to be 25kg./ha.

Table 10      Maize and Sorghum Import Parities, ADC Buying Prices,  
and Mogadishu Wholesale Prices, Late 1983  
(Prices per metric ton)

	<u>Maize</u>	<u>Sorghum</u>
F.O.B. Gulf ports*	\$148.2	\$132.1
Insurance and freight	<u>60.0</u>	<u>60.0</u>
c.i.f. Mogadishu	\$208.2	\$192.1
Shilling value c.i.f. @		
17.38sh = \$1 U.S.:	3,618sh	3,339sh
35 sh = \$1 U.S.:	7,287sh	6,724sh
51 sh = \$1 U.S.:	10,618sh	9,797sh
Plus 250sh handling charges, warehouse Mogadishu @		
17.38sh = \$1 U.S.:	3,868sh	3,589sh
35 sh = \$1 U.S.:	7,537sh	6,979sh
51 sh = \$1 U.S.:	10,868sh	10,047sh
ADC buying price:	2,200sh	1,600sh
Modal wholesale price in six Mogadishu markets:**	7,000sh	6,000sh

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\*October 1983.

\*\*December 6, 1983, see Appendix Tables B-7-a and B-7-d.

The return to labor, if the output were marketed at the official price of 160 sh/q would in 1983 amount to less than 5 shillings a day. The prevailing wage for weeding labor in the Gu season 1982 in the Baidoa region was between 30 and 50 sh a day.<sup>1/</sup>

4.12 The potential disincentive effects of low ADC prices on production have been diluted and, at least in recent years, largely nullified because in most parts of Somalia many sales have taken place not at the official prices but at market prices. Since the parallel market prices (after 1981, the open market prices) were higher, and probably much higher than the official ADC prices, real producer incomes, terms of trade, and overall incentive effects were less unfavorable than appears to be the case from the official price trends. Nonetheless, it is hardly a positive judgement to conclude that official price policies were not as harmful to producer incomes and incentives to produce as they appear to be from official price data because official prices were widely flouted.

Official selling prices have been too low.

4.13 The Government has attempted to hold down the prices consumers pay for grain and grain products. Facing the usual choice between producer incentives and consumer pressures, Somalia seems to have chosen a consumer-oriented grain import and pricing policy. But as paragraphs 3.17 and 3.18 have shown, the official selling prices of ADC, ENC, and the pasta factory have been below the market prices consumers have paid for grain and grain products.

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<sup>1/</sup> See Boston University, Somalia: An Institutional Profile USAID, Mogadishu, March 1983, pp. III-17 and 18. A 1983 study, involving intensive interviewing, estimated that in the 1982 Gu season, returns to labor in sorghum production in the Bay Region were 15 shillings a day lower than the rate paid to wage labor during any part of the year.

4.14 The basic cause of the gap between market and official retail prices is that ADC, ENC and other actors have not put on the market enough foodgrain to drive market prices down to the levels they have decreed. The consequence is that anybody who gets access to foodgrains at low official prices can sell them to somebody else for the higher supply-and-demand established prices. Anybody who can buy pasta at the factory gate for 10.75 shillings a kilo can sell it to another consumer for something near the market retail price of 27 shillings or sell large amounts to private wholesalers for 24 shillings a kilo. The 13.25 shilling -- or 16.25 shilling -- per kilo difference is "unearned income" for the individuals lucky, or wily, or powerful enough to be able to buy at the official price and sell at the market price.<sup>1/</sup> That income is "unearned" because these buyer-sellers provide no service to the ultimate consumers (if they do provide either transportation or temporary storage, their compensation for those real services is part of their earned -- not part of their unearned -- income).

4.15 Annex X makes some rough estimates of the unearned incomes provided on spaghetti from the pasta factory during the first half of 1983 and on rice sold by ENC in 1982. The estimated unearned income is 14 million shillings in six months on spaghetti sales and 96 million shillings in one year on rice sales.

4.16 This kind of unearned income is not the result of wickedness in traders nor is it controllable by government -- at least not by feasible means. This kind of unearned income will always go to buyers when, at the official price, people want to buy more than the amount available for sale at that price. Only a system of completely enforced price controls could prevent it; at every

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<sup>1/</sup> In the jargon of economists, this difference is a quasi-rent. Annex IV analyzes the role of such quasi-rents in Somali grain markets.

level grain would have to exchange at the official price. No one could be permitted to resell at the market price. This would mean control over all transactions without exception. This is not feasible.

4.17 Grain importers also obtain unearned income (as do other importers) when they are able to obtain foreign exchange at an official exchange rate then are able to sell their imports in markets where prices are determined by marginal imports bought at the parallel exchange rate or by other forces that would make the importers willing to pay above the official exchange rate.<sup>1/</sup> In the second half of 1983, the Somali Government no longer provided foreign exchange at official exchange rates to grain importers, but it has done so in the past.

4.18 The system is open to widespread abuse. The right to buy from ENC, ADC, and the pasta factory at low official prices is a license to enjoy unearned income. Similarly, the right to buy foreign exchange at prices below the parallel rate<sup>2/</sup> is also a license to enjoy unearned income. Almost without exception in economies where such licenses for personal gain exist, they are a source of inequity and contention.

4.19 That kind of inequity has been reduced in Somalia because a substantial portion of ADC, ENC, and pasta factory sales are to other Government agencies. As reported in paragraph 2.16 above, the pasta factory and ADC keep no records of proportions of sales going to other Government agencies, but ENC estimates that 75 percent of its 1982 sales were intragovernmental. These sales keep the unearned income within the Government, but they have two other effects: first, they permit the buying agencies

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<sup>1/</sup> Annex IV analyzes the role of such unearned income in Somali grain markets.

<sup>2/</sup> Or, at least, below the equilibrium shadow rate.

to operate with budgeted costs below their true costs. Second, they leave the selling agencies with understatements of the value of their sales.

The importance of concessional imports has been overlooked.

4.20 The authorities do not in fact regard decisions about food aid as something over which they have control; as they see it the donors decide how much food aid Somalia will get. Moreover, it is not clear that the disincentive effects on domestic agriculture are weighted very heavily. In the view of some officials, the more food aid the better. But, as shown in paragraph 3.19 above, the volume of food aid entering Somalia is so large that the Government cannot establish price policies that are realistic unless it recognizes the importance of concessional imports in the determination of domestic market prices.

4.21 Two points previously made about the quantity of concessional grain imports may appear to be in conflict although they are not. Paragraph 4.14 reported that the quantity of grain imports has not been large enough to drive prices down to the levels of official ADC, ENC, and pasta factory sales. Paragraph 3.19 suggests that concessional grain imports have depressed domestic grain prices. The two assertions are reconciled by recognizing that concessional grain imports have been big enough to affect domestic prices but not big enough to move them down to the official selling prices used by ADC, ENC, and the pasta factory.

## V. RECOMMENDATIONS

5.01 The findings on deficiencies and problems indicate a number of changes in policy that would help Government to achieve its objectives of faster agricultural growth, increased well-being for the nation's farmers, and increased national food self-sufficiency. The three major recommendations are outlined first: repeal of restrictive legislation; definition of new roles for ADC and ENC; and definition of appropriate pricing policies for major foodgrains. A fourth set of recommendations groups a number of subsidiary proposals on policy-making institutions, sales policies of state farms, and required studies.

### A. Change in the Legal Environment

5.02 Prevailing law continues to prohibit private trade in cereals, despite the reality that virtually all maize, and most other grains are privately traded. As noted above, this situation creates uncertainties of various kinds, and involves substantial short-term and long-term costs; it raises transaction costs and it inhibits the development of trading institutions.

5.03 The problem might be removed by simple repeal of the existing prohibitions, Law # 51 of 1971. But so many uncertainties persist in the countryside, about what is legal and what is not, and so much suspicion has accumulated regarding ADC, that further steps are called for. What is needed to begin with is a new Presidential circular or other law establishing unambiguously in law what is now the widely prevailing practice: that farmers can sell to whomever they wish, at the best price they can get; and that this means that private trade in cereals is a lawful activity.

5.04 It would be desirable to go further than this in any new legislation or Presidential circular. The right to transfer grain across Regional and District boundaries should be reaffirmed, the

legality of open market prices recognized, and protection of farmers and traders against the requisitioning of grain except under carefully specified conditions should be made part of the law. But larger issues are involved here - for example, reform of the overall system of control of prices, which remains in effect in prevailing law. For this reason, only the minimal reform of the law is emphasized here; formal establishment of the rights of farmers, traders and other agencies to buy and sell cereals at open market prices.

5.05 A complementary step should be undertaken: an intense information campaign, to bring to every village knowledge of the new marketing situation. Even without a change in the law, the prevailing practice of free farmer choice and the non-applicability of the ADC monopsony should be widely and aggressively publicized.

5.06 Some observers are unconvinced about the urgency of this task. They say farmers and traders are already well-informed about the new liberalization policies in practice. They cite the shrinking volume of ADC purchases as evidence along with the reappearance of storage facilities in public view. But if the Team's observations and those of other technicians working in rural areas, are true, if many traders and farmers are hesitant about their transactions, and if some officials still enforce the prevailing law that says that farmers cannot lawfully sell at open market prices to private traders, then large benefits will follow from a change in the law. If in fact, all or most of the actors are not inhibited and the Team's assessment is mistaken, there will be no loss from changing the law and only small costs from an information effort.

5.07 An unambiguous legal ratification of the liberalization of grain markets that has occurred in practice would by itself be a major step forward in the improvement of marketing and price policy. An open, competitive marketing system multiplies the options open to farmers and encourages the development of trading institutions and trading competence. This is already happening. But the legal change will reduce uncertainties and hence costs, and along with improvements

in transportation, communications and information flow, will make the marketing environment more congenial for farmers. Even aside from its price implications, the removal of uncertainty, the increased availability of services, and the expansion of farmer options will by themselves tend to expand production and marketings. The higher realized producer prices implicit in these changes will of course reinforce this tendency.

5.08 In this regard it is worth recalling that in the maize and sesame growing areas of the Lower and Middle Shebelle, the liberalization of marketing, and the possibility for farmers to sell at open market prices, by itself has already produced a rush to acquire land leases and considerable expansion in cultivated areas. As can be seen in Table I, Annex V, since 1975, a total of 139,000 ha. have been leased by government, of which almost 60% (80,000 ha.) is in the Middle and Lower Shebelle. Moreover, during the first nine months of 1983, the Ministry of Agriculture issued leasing certificates for 41,000 ha. This is equal to over 40% of the total land leased during the preceding eight years.<sup>1/</sup> So the interest in agricultural activity generated by the liberalization of marketing has been extremely significant, and is growing fastest in those regions where the freeing of the market is most complete.

#### B. Organizational Reform:

##### Merging ADC/ENC into a National Grain Agency

5.09 ADC was founded as a monopsonist with responsibility for handling all marketing and off-farm storage of maize and sorghum. It was also responsible for helping farmers increase production. ENC began as sole importer for most commodities other than maize and sorghum and as principal wholesaler for those commodities. Each agency was provided with staff and facilities adequate for many of those responsibilities. Now that each agency performs only a fraction of its former work, and because of recent decentralization policies, it is clear that there is room for consolidation. The two agencies should be merged into one institution, a National

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<sup>1/</sup> See Annex V

Grain Agency, the NGA.<sup>1/</sup> This new agency would implement policies formulated at the Ministerial level and would have the following responsibilities:

. It should supply collective consumers schools, hospitals, the military and other public institutions. The NGA would thus carry on the functions of ADC and ENC in this respect.

.The NGA should be responsible for coordinating and implementing food-aid agreements negotiated at Ministerial level. NGA should also be responsible for coordinating food-aid deliveries and organizing storage arrangements to assure a steady flow into the country, and a steady availability on local markets. The NGA should make the initial sales of concessional food imports.

. It follows that the NGA should be responsible for administering the nation's emergency grain reserve. To pursue this task effectively, and even to establish rational guidelines for NGA activities in this area, requires more information and analysis than is now at hand. Therefore, an indepth study of alternative food security policies should be undertaken as soon as possible. It should derive more up-to-date and reliable estimates of grain consumption, and it should analyze emergency food needs in terms of types of grain required. It should determine transport capacities and log times, storage needs in urban and rural areas, and the costs and benefits of operating grain reserves of various sizes and composition, as compared to available alternatives, including creative use of international markets. Technical assistance should be sought to execute this study. Financing would almost surely be available from many donor sources, including the World Bank.

. To overcome the present problem of dispersed authority for grain and other food policies, some one Ministry, or - preferably - an inter-Ministerial committee, should be assigned responsibility for defining the nation's food security policies. This responsibility should extend to questions of foreign food aid, planning for food emergencies, and market interventions. The NGA should be the secretariat for this food security committee.

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<sup>1/</sup> Although the pasta factory seems likely to continue to process concessional wheat, it should not be brought into the NGA. The pasta factory's record of efficient and profitable operation and its status as a manufacturing enterprise, argues against its merger with the overall grain agency.

.The NGA should continue to maintain a presence in grain markets, but with a different emphasis.

- It should, first of all, operate only at the wholesale level, leaving primary marketing to other actors: cooperatives where they exist or can be nurtured, and private traders everywhere. 1/

- In its sales and purchases policies the grain agency should try to dampen seasonal price fluctuations, with a view to protecting producers who may be under pressure to sell at seasonal price lows in the post-harvest period, and to protect consumers (urban and rural) who may have to pay peak prices at pre-harvest periods. This could be done by the grain agency suitably timing open market sales and purchases.

- The market presence of the grain agency would also protect potentially vulnerable farmers against market failures - transport inadequacies or trader conspiracy for example.

- Whether the grain agency should adopt an aggressive producer price policy - for example by guaranteeing floor prices which could be above market levels for a number of years in succession - is a complex and controversial question. It is discussed in detail below. the conclusion is that, by reducing producer uncertainty, floor price policy can stimulate increased production, without bringing growing stocks, and that should be adopted, though great care is required in assuring the floor price (at which the grain agency buys) and the ceiling price (at which it sells) are set close to market levels.

- The grain agency should adopt several new roles, which would encourage smoother, more efficient functioning of grain markets and hasten the development of market institutions.

- The NGA should generate market information via its own activities. One of the weaknesses in the present agricultural marketing system is the scarcity of large-scale wholesalers or retailers that operate in different markets and that both generate and use nation-wide market information. Such organizations play important roles as integrating factors in more advanced marketing systems. In Somalia, the NGA, which would in fact be a national grain whole-

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1/ All consumer sales at retail levels, similarly, should be left to cooperatives and private traders, as is now in fact the case.

saler, should begin to fill this role by providing frequent public reports on prices and quantities involved in its own transactions. More specifically, the NGA should develop and administer a national price collection and reporting service. The prices prevailing in each District's wholesale and retail markets should be recorded and disseminated. Some of these data would flow from the NGA's own purchases and sales at the wholesale level. Retail level data should be collected in a more conventional price-gathering effort. After collecting the data, the NGA should provide weekly or daily market price reports. These should be broadcast on national radio and made available in written form to extension agents, traders, coops, donor representatives, and all other interested parties. The agency might find it helpful to seek, at an early stage, technical assistance to help plan and introduce this price reporting system.

-The NGA should act as the spokesman for efficient marketing development. There are many ways it can act in this role, most of which involve it in government councils and elsewhere, in representing the national interest in open, competitive marketing. Thus, when key roads are cut, or specific feeder roads neglected, the grain agency can channel such information to budget decision-makers and national political authorities and argue for corrective action. And when - as happens often - local (District and Regional) authorities interpret local needs (and the law) in such ways as to cause fragmentation of grain markets, the NGA could make clear to the authorities in Mogadishu what is happening and its impact on national interests.

. Once the duties of NGA are defined, technical assistance should be obtained for a thorough management audit to determine the appropriate organization, personnel requirements and job descriptions of the new agency.

5.10 In addition to the need to get its organization right, the merger of ADC and ENC is sure to bring NGA a problem of redundancy in staff and in facilities. The merged staffs will exceed 2,000 people. Some will not possess the skills needed for NGA's new responsibilities. And where some of these can be trained, the total number will be excessive. Similarly, ADC and ENC possess

storage space greatly in excess of 200,000 tons and also greatly in excess of the needs of NGA. Some of it of course will be required for the national emergency reserve. Some of the rest is not usable without extensive repair. The remainder could be either sold at auction, or leased to the private sector. <sup>1/</sup> There are technical and political difficulties with each of the available options. The Team recommends that the management auditors be asked for advice on ways to deal with these issues.

5.11 If NGA is to operate as a commercial enterprise and compete effectively with private traders, its managers will have to be paid better salaries than those now provided. This issue - which has implication beyond the scope of any one agency - should also be studied by the management auditors.

5.12 Finally, there is the questions of government imposed activities with a social objective; e.g., selling below cost to some consumers, for example, and paying more than market prices to some producers. Such deficit-creating activities could lead the new agency down old paths toward indebtedness to the Finance Ministry to limits at financial institutions, and to a shortage of operating capital. In short, such activities could cripple the new agency's capacity to perform its priority functions. If NGA is obliged to undertake non-profitable activities, it should be paid for them on a separate account, that is, these kinds of activities should be explicitly subsidized by government, with their costs financed out of a clearly defined subsidy in the central government budget.

### C. Price Policies

5.13 Price policies receive a great deal of attention nowadays in analyses of rural development, in Somalia and elsewhere. The

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<sup>1/</sup> The divestment (sale) option is unattractive because buyers, knowing Government has made the decision to sell, would almost surely make only very low offers.

argument is generally made that unless farmers receive remunerative prices for their outputs, they will not expand production and sales.

5.14 This is undoubtedly true. But the importance of direct price policy in the overall incentive structure can easily be exaggerated.

5.15 First of all, marketing arrangements in themselves have important incentive aspects. The opportunity to choose from among different buyers can protect and reassure farmers. Greater certainty that he can sell grain at the best price available will assuredly affect the farmer's income-earning strategy. The emergency of more developed marketing institutions will mean better services: transport market information, credit, storage capacity and techniques, and a wider choice of inputs and consumer goods. Thus a more open, diversified and competitive marketing system brings powerful positive incentive effects in itself, i.e., independent of its price implications. Moreover, public policy's direct effects on agricultural prices can be relatively unimportant because most transactions take place not at the "official" prices, but at open market prices -- as is now the case for maize and sorghum. To raise the ADC buying price of maize from 220 to 300 sh/quintal is not very meaningful when the free market price is 800 sh/quintal.

5.16 Finally, price policy may have a limited potential for expanding aggregate production because of technological constraints. We will argue later that there is considerable scope for aggregate supply increases, though the absence of suitable technology will stop farmers from pushing total output beyond a certain point in spite of price incentives.

5.17 All of this said, prices are nonetheless very important. We make three major points here. First, the most important elements in pricing policy for domestically-produced foodgrains are indirect: import policies and policy toward liberalization

of marketing. Secondly, in import policy, what really matters is the quantities imported, more than price decisions. Once quantities are determined, prices of imported grains should be set at market-clearing levels. Finally, with respect to direct price policies for domestically-produced cereals the responsible grain agency should act on prices mainly through open market purchases and sales at the wholesale level; its mandate should be to buy and sell mainly at market prices in competition with private wholesalers, to protect consumers and producers against market failure, to dampen seasonal fluctuations, and to provide a guaranteed floor price for producers, this price being determined with attention to fiscal and storage capacity constraints.

5.18 Throughout the following analysis we assume that the chief problem of the past decade -- the ADC monopsony and its attempts to impose below-market prices on producers -- is a thing of the past.

#### The pricing of imported cereals.

5.19 The Somali Government faces a very difficult problem when it undertakes decision-making about prices for concessional imports of grain and grain products. The economic literature has little advice to offer beyond the use of import parity using "shadow" exchange rates, i.e., rates priced at an appropriate equilibrium.<sup>1/</sup> But the appropriate exchange rate is not easily calculated for Somalia in 1984.

5.20 Beyond the problem of identifying an appropriate exchange rate, the Somali authorities must recognize that import parities will be irrelevant when concessional imports are so large that they can be sold only at prices below import parities. The essential point in all Somali decision-making about the size of concessional imports is that, if they are large enough, then

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<sup>1/</sup> For example C. Peter Timmer, Walter P. Falcon, and Scott R. Pearson's Food Policy Analysis (Washington: World Bank, 1983) discusses problems of "Domestic Food Price Policy," pp. 274-280, with no mention of the difficulties involved in decision-making about quantities of concessional food imports.

there will be a pricing decision implicit in every decision about concessional import quantity; the larger the quantity, the lower domestic prices.

5.21 The appropriate rules to guide decisions about concessional import quantities are easier to state than to implement. First, to the extent that there would be commercial grain imports in the absence of concessional grain imports then any quantity of grain imports up to and including that concessional quantity will have no effect on domestic prices, or producer incentives, or import dependency. If Government wishes to save foreign exchange and acquire local-currency revenue (from sale of the food aid) without affecting domestic prices, then it should seek a concessional quantity just offsetting the commercial.

5.22 A second rule applies only after the concessional import quantity has been decided. Then, given some flow of concessional imports, Government pricing should seek to avoid inventory accumulation (beyond that needed to maintain sales between landings) and to avoid giving unearned income to anyone by permitting them to resell at higher market prices. Put in positive terms, this rule calls for prices that will just clear the market over several years.

5.23 The third rule is that in the long run Government should move toward concessional import quantities that bring prices to import parities calculated at realistic exchange rates. The advantage of such prices is that they provide accurate signals regarding opportunity costs. So the fourth rule is that when these import parity prices are reached, transparency should govern every undertaking either to tax imports to raise prices to stimulate local cereals production or to subsidize sales prices to aid consumers. In particular, subsidies should be clearly identified in the budget so everybody knows the cost to Government.

5.24 The recommendations to clarify the legal situation with respect to open market sales and to change the scope of activity of the new National Grain Agency have obvious, though very important, price policy implications. In effect these proposals

confirm the main thrust of existing practice in most of Somalia by recognizing private market agents and by legitimizing the freedom of farmers to sell their crops to whomever they wish and for the best price they can get.

5.25 One option on price policy for domestic grain producers is to have government do little more than this - i.e., little more than assure that marketing remains competitive and that farmers receive market-determined prices for their outputs and that the Government will not again force farmers to sell at below-market prices. This would mean that "official" producer prices would no longer be fixed. The grain agency would still have vital price-related functions, as noted earlier. It would maintain its presence in grain markets, competing with private traders at the wholesale level. By this market presence it would protect farmers against "market failure" - i.e., against exploitation by traders taking advantage of farmer isolation, inadequate information, and opportunities for trader conspiracy. The extent to which such market failure exists is not known. For structural and other reasons, there is some reason to doubt that it is widespread.<sup>1/</sup> Nevertheless, the prevention of abuse of market power should be one of the operating guidelines of the new grain agency, which could make special efforts to maintain its presence in areas where for reasons of market structure or suspected trader collusion, competitive forces may be weak. It would not only buy and sell in these areas, but also disseminate relevant market information.

5.26 This approach to price policy could and should also include an effort to dampen seasonal fluctuations in the prices farmers receive and consumers pay. The most vulnerable time for many farmers is at harvest, when demands for money income may be urgent, and prices of maize and sorghum low. This is the principal reason why the Team recommends a price stabilization effort for maize and sorghum. The grain agency would achieve its fluctua-

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<sup>1/</sup>The Study Team asked many farmers about their perceptions of problems of indebtedness, forced sales, and trader conspiracy. The farmers answered that these are not common problems.

tion - dampening goal not by fixing seasonally uniform producer and consumer prices, but by open market operations - i.e., an appropriate pattern of seasonal purchases and sales. It would also influence seasonal fluctuations by its import policies.

Influencing domestic prices.

5.27 One of the controversial aspects of producer price policy in many countries is the issue of "floor" or support prices for producers. Much can be said on both sides of this question. A number of arguments are usually put forward against "buyer of last resort" policies - i.e., government grain agencies guaranteeing floor prices that in periods of very large harvests will be above the prices that would otherwise be reached.

5.28 To succeed, any guaranteed price scheme must be credible: farmers must be persuaded that they will be able to sell all they can at or above the announced price, and that this price guarantee will be maintained for some reasonable period into the future. But experience in most LDCs reveals that this credibility is rarely established. Often, the grain boards set the floors so high that they are unable to purchase all the grain offered for sale. In part this is because they lack adequate financing; most of these agencies operate under severe constraints in terms of access to budget resources and working capital. They are periodically out of the market in the middle of harvests when they are most needed, because cumbersome credit procedures deny them timely access to financial resources. Often they work with large budget deficits caused - among other reasons - by government - imposed social policies requiring below-cost sales to consumers.

5.29 In most LDCs, government storage capacity is limited in physical and managerial terms. Guaranteed prices in a year of high production sometimes leads to heavy purchases and then to public storage involving both increased costs and waste of stored grain. While on - farm storage in most poor countries is substantial, and in many (as in Somalia) is cost-efficient, public sector storage tends to be both capital - and labor - using and characterized by relatively high spoilage rates.

5.30 For these and other reasons, few developing countries have succeeded in maintaining effective guaranteed producer price schemes. Most of these schemes have proved to be costly failures. And even when they have been successful, costs have been high.<sup>1/</sup>

5.31 If guaranteed buying prices are set so high that the grain agency stores large amounts, then it will incur costs that must be financed from the hard-pressed national budget. In countries without mineral resources or significant industrial sectors the financing of these costs will have to come from other parts of the agricultural sector--for example, from livestock or other export sub-sectors. This will have negative effects on export earnings and on income. The resources spent on price supports could be used for other, more developmental, purposes. Slower economic growth may therefore be part of the cost of any grain stabilization program that is allowed to become an effort to maintain prices above market levels.

5.32 A price support scheme may have ambiguous equity effects. It can raise prices paid by cereals consumers, rural and urban, hence reducing their real incomes, while raising the incomes of net sellers of grain many of whom may be larger and better-off farmers.

Floor guarantees as production incentives.

5.33 On the other side of the debate is one potentially powerful argument: that farmers may not be induced to expand production of domestic food grains unless they are given some assurance that output expansion will not prove unprofitable because of price declines. In the Somali case, given the (price) inelasticity of demand for sorghum and maize, every increase in output will

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<sup>1/</sup>In Turkey, for example, the Grain Marketing Board generates a huge operating deficit each year; it buys at favorable prices and sells below cost. The Indian, Phillipine and Mexican Governments, among others, have had some impact on production but have incurred very large costs in their price support efforts.

lead (other things equal) to a relatively larger decline in price. Farmers' knowledge that this is likely will make for sluggish supply responses to price increases. Without some guarantee about the level of future cereals prices, then, and in the absence of other changes that are cost-reducing, it may be difficult to induce an increase in domestic production sufficient to significantly cut Somalia's dependance on food imports, and in particular its dependance on food aid.

5.34 There is no question that production of cereals can be increased if higher prices are guaranteed, thereby changing the relative profitability of cereals production compared to the alternative income-earning activities of the farm household. And it may be that Somali decision-makers place so high a priority on increasing domestic food production that they are willing to sacrifice substantial output, foreign exchange and income to achieve more food self-sufficiency. If so, and some rough estimates of the costs involved are at hand, then a "positive" (above market) cereals price policy is correct.

#### Optimism about supply responsiveness

5.35 But the issue goes deeper. Can a supply response be envisaged which leads not to a substitution of activities but to an increase in the aggregate production of farm households? The following considerations suggest that there is reason for cautious optimism.<sup>1/</sup> The brief review of technical aspects (in Annex IX) stresses technical constraints such as limited availability of irrigation water (at least over the next few years), lack of draft power and labor, absence of high-yielding varieties for sorghum, and continued dependence on rainfall patterns as the main determinants of production volumes. Without determined efforts to rehabilitate and expand irrigated areas, to increase the efficiency of water use, to develop and spread new varieties, etc.,

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<sup>1/</sup>While all members of the Team subscribe to these conclusions, there were differences of emphasis on the positive and negative aspects discussed in what follows.

these constraints will, in a not too distant future, become absolute barriers to further production increases.

5.36 But in the short run, (defined here as a period of about five years), further production increases would appear to be possible. The technical review in Annex IX points to a number of avenues toward increased production. Also, this is the crucial point, higher producer prices (and confidence that they will be sustained at that higher level) are themselves a powerful lever to break some of the constraints identified, in particular, those associated with lack of labor, draft-power and inputs. The Somali farm family has diversified its activities over many areas, shifting labor among crop production, livestock husbandry, and activities in non-agricultural occupations (Gulf States, services in town, trade, etc.). There may be considerable scope for redeployment of labor in response to higher returns from the production of grain. There may also be hope for inter-crop shifts out of minor crops (chosen, according to farmers interviewed, in order to evade the ADC buying monopoly at unrewarding prices) back to grains in high demand. Finally, higher prices (and the promise of high prices also in the future) are a prerequisite for farmers making investment decisions that will break some of the constraints and lead to different production functions. While the possibilities may be limited for sorghum, maize production may receive additional impulses from decisions to use packages of improved varieties with fertilizer and with pesticides which are not profitable at lower price levels. Even the critical irrigation water shortage may not be a given when higher crop prices raise the opportunity cost of wasted water. Then, the available volume of waters will perhaps be used more economically and will then permit irrigation of a somewhat larger area. Moreover, incentives to use more pumps more effectively, and to maintain irrigation canals better, can play a major role, as they have in the Shebelli valley in recent years.

5.37 The extension of hectarage in the Shebelli, mentioned earlier, was accompanied by the adoption of new inputs that were not

affordable before open market prices were received, (diesel pumps for better water control, tractors, etc.). This (and good weather) accounts for the large expansion in maize production that, according to official statistics, occurred after 1980. (See Appendix Table A-1). Thus, a key variable in the matter of supply response may be the degree of confidence farmers feel that real prices will remain attractive. The farmers need an unambiguous signal that not only will prices be raised and the markets liberalized this year, but that this is a long-term policy on which farmers can build their long-term decisions. This message, even if sent with great clarity, will take some time to sink in. The longer they have struggled under adverse conditions, the longer it will take to convince farmers that the present better times are here to stay. This has to be taken into account when assessing short-term supply responses, in Somalia, as elsewhere.

5.38 We conclude from this analysis that a policy of guaranteed producer prices is desirable, at least for the next few years, but that prudence is required in setting the price band - the difference between the guaranteed producer prices and the prices at which the grain agency sells to consumers. This means that the "official" prices should rarely be far from market-determined levels. Under this guideline, only in cases of unusually abundant harvests would sizeable buying take place. This analysis assumes of course that government will no longer intervene in grain markets to push producer prices below market-determined levels.

#### Timing announcement of floor prices

5.39 The optimal way to establish prudent price floors would be to announce prices at harvest time, when most of the relevant market information is in. Most prices at that time will reflect farmer and trader expectations of yields, so will allow for the effects in each season, of weather, river flows, and of all other relevant factors. With NGA fulfilling an obligation to collect price data in all Districts, it will be able to set a price appropriate to the circumstances of each area.

5.40 One consequence of this approach would be to dramatically simplify many problems of price policy formulation - for example the need to know relative costs of production to determine relative prices among crops. Such information would still be useful for many purposes, but its policy-making importance would be reduced. The market would tend to give adequate signals regarding the profitability of different crop mixes in different producing areas.

5.41 The trouble with announcing prices at harvest time, however, is that it reduces the incentive effect of price guarantees. Farmers prefer to know at planting time what floor prices they can count on. For this reason, and because of other concerns, Government may prefer to announce floor prices before each planting season. In this case, floor-setting will be more difficult. The grain agency will have to consider previous price levels, look at current trends and attempt to set prices at levels that will assure farmers protection against extreme price declines while not saddling the agency with excessive buying obligations. If the NGA collects District price data regularly, it will have a guide to appropriate interarea floor-price differentials. But with the differentials, as with the basic floor price, getting prices right will be especially demanding if decisions are made before planting, and this will require a better information base and a much stronger set of policy-making institutions.

## VI. FURTHER STUDIES AND ANALYSIS

5.42 To help Government formulate appropriate food policies, an in-depth study is required of the food security strategy options available for Somalia. The details of such a study were outlined in paragraph 5.09 above.

5.43 we also referred in paragraph 5.09 to the need for a management study of organizational alternatives for the proposed National Grain Agency. This study is needed soon.

5.44 Little information is available of the kind needed to make sound policy decisions in the marketing and price policy areas. The absence of a solid, baseline study of the marketing system sorely handicapped the Team's work. We were able to observe and identify the system's principal features but could not describe systematically either its dimensions or its operation. There is clearly need for a study that would identify and analyze the "conventional" elements of the system: the structure of markets (number of buyers and sellers, size distribution, ease of entry, etc.) measures of competitiveness, marketing margins, rates of returns to storage, etc.

5.45 The members of this team, in common with many other observers, believe that Somali grain production may be quite price-elastic in the near term. The main reason given is that, like others in East Africa, Somali households have diverse income-earning options: animal production and sale, wage labor in the village or abroad, grain production, other crop production (cowpeas, groundnuts, and watermelons for example). The precise nature of these trade-offs and the micro-economics of alternative strategies are poorly known, yet important for policy. The Base Line Survey being conducted in the Bay Region will provide relevant information. We recommend a study to build on that Survey and to estimate actual grain supply price elasticities for both maize and sorghum.

5.46 Somalia is one of the few LDCs where half or more of marketed cereals is imported and where 20-30 percent of its grain consumption comes from concessional imports. Yet very little is firmly known about this sub-sector of the economy. Even the question of how much grain is imported is contentious. The issues of how food-aid decisions should be made and of appropriate pricing policies for imported foods all need deeper analysis than the Team could give in a few weeks. A study of how other food importing (and/or aid-dependent) countries determine food import volumes and prices would be instructive for Somali policy makers.

5.47 A more reflective or analytic piece of work would be useful on some broad issues of strategy. The Somali economy is fundamentally outward - looking: its animals are exported; its

people go across the Gulf by the tens of thousands; it imports 30-40 percent of its foodgrain consumption. At the same time, its agricultural sector has some special features. It is overall relatively small for a country at its income level; and the rainfed sector is especially small, occupying only 14 percent of the population. The irrigated agricultural potential may be sizeable; tractors are already in wide use (though brought in as gifts or at official exchange rates) and are adopted with astonishing rapidity by old villages and "traditional" farmers. The cities have been growing rapidly. In these circumstances, do the "standard" analyses of good policy pertain? Should Somalis worry that wheat and rice import grows so fast? Should import volumes and price policies be shifted more toward the stimulation of producer incentives? or should Somalia contemplate the shrinking of its rainfed agriculture, the passage to a more capital intensive irrigated agriculture, the exploitation of new domestic natural resources, and the strengthening of links with the Gulf states, all the while increasing its dependence on imported wheat and rice? The questions are imperfectly framed, but there appear to be some special features here that call for new longer term reflections by somebody.

5.48 The introduction of a new grain marketing organization and the elaboration of the price policy proposals set out above, will require a considerable build-up of analytic competence in the new agency - and perhaps in other agencies. Capacity in economic analysis is generally scarce in Somalia, and staff with specific experience in agricultural pricing problems is scarcer still. Technical assistance is probably available from many donors, including the World Bank, and should the National Grain Agency be established, the Team recommends that such assistance should be sought at an early stage. The training components should be especially substantial in such technical assistance arrangements.

STATISTICAL APPENDIX

Table A-1

Somalia: Production of Maize, Sorghum, and Rice.

1970 - 1983

(Thousands of Metric Tons and Percentages of Total)

Calendar Year	<u>Maize</u>		<u>Sorghum</u>		<u>Rice</u>		<u>Total</u>
	<u>Tons</u>	<u>% of Total</u>	<u>Tons</u>	<u>% of Total</u>	<u>Tons</u>	<u>% of Total</u>	<u>Tons</u>
1970	122	43	158	56	3	1	283
1971	99	43	129	56	2	1	230
1972	115	43	149	56	4	1	268
1973	99	43	128	55	4	2	231
1974	97	43	126	55	4	2	227
1975	104	43	135	55	5	2	244
1976	108	43	140	55	5	2	253
1977	111	42	145	55	8	3	264
1978	108	41	141	54	12	5	261
1979	108	41	140	53	14	5	262
1980	110	41	141	53	17	6	268
1981	157	41	207	54	19	5	383
1982	150	37	235	58	20	5	405
1983 <sup>1/</sup>	235	62	141	37	3	0.8	379

<sup>1/</sup> Forecast

Source: Ministry of Agriculture

STATISTICAL APPENDIX

Table A-2-a

Somalia: Imports of Maize, Rice, Wheat, and Wheat Flour.

1972 - 1983

(Thousands of Metric Tons)

Calendar Year	Imports			
	Maize	Rice	Wheat	Wheat Flour
1972		39		30
1973		25		14
1974	11	17		10
1975	89	22		36
1976	79	18		43
1977	34	52		24
1978		43		34
1979	22	85		54
1980	48	62	14.7	53
1981	91	42	12.3	55
1982	3	41	5.8	16
1983	3	42	8.5*	15**

\* Jan. - June

\*\* Jan. - October

Source: For maize, ADC, and, for 1982-83, World Food Program food-for-work project. For rice for 1972-81, ENC; for 1982, World Bank 1983 Updating Memorandum, Table 3; for 1983 Agricultural Ministry presentation to farmers' rally, in Mogadishu 4 Oct. 83. For wheat, flour, ENC. Wheat, calculated from pasta factory output times 1.43.

STATISTICAL APPENDIX

Table A-2-b

Somalia: Imports of Maize, Sorghum, Rice and of  
Wheat and Wheat Flour and Pasta.

1977 - 1983

(Thousands of Metric Tons.)

<u>Calendar Year</u>	<u>Maize</u>	<u>Sorghum</u>	<u>Rice</u>	<u>Wheat and Wheat Products</u>	<u>Total</u>
1977	37		52	164	253
1978	21		43	144	208
1979	21		85	206	312
1980	117		105	352	574
1981	144		85	190	419
1982	3		70	160	233
1983	3	3.5	22	41*	69

\* Includes 1,355 tons of commercial pasta imports paid  
for by letters of credit.

Source: Ministry of Agriculture.

STATISTICAL APPENDIX

Table A-3-a

SOMALIA

ADC PURCHASES, CONCESSIONAL INTAKE, AND SALES OF MAIZE, 1971-83

(Thousands of Metric Tons)

Calendar Year	Purchases			Concessional Intake	Sales	Estimated Year-end Stock <sup>1/</sup>
	From Farmers		From Abroad			
	Tons	As a % of Estimated Production				
1971	55	56			40	15
1972	60	52			50	25
1973	37	37			52	10
1974	33	34	11		54	0
1975	20	19	49	40	110	-1 <sup>2/</sup>
1976	30	28	37	42	93	15
1977	21	19	28	6	47	23
1978	31	29			43	11
1979	11	10		22	35	9
1980	4	4	15	32	54	7
1981	6		22	69	59	45
1982	2	1			35	12
1983	4	3				0
Total	314		163	214	688	

<sup>1/</sup>These numbers make no allowance for wastage.

<sup>2/</sup>The result of some error in the data.

<sup>3/</sup>ADC reported actual maize inventories on 31 Dec. 82 as 16 thousand metric tons.

Source: The Agricultural Development Corporation. Percentages calculated from the Agricultural Ministry's production figures shown in Appendix, Table A-1.

STATISTICAL APPENIX

Table A-3-b

SOMALIA

ADC PURCHASES AND SALES OF SORGHUM

(Thousands of Metric Tons)

Calendar Year	Production	ADC Purchases		Sales	Estimated Year-end Stock <sup>1/</sup>
		Tons	As a % of Production		
1970	158				0
1971	129	29	22	24	5
1972	38	38	25	25	18
1973	128	15	12	32	1
1974	126	17	13	17	1
1975	135	13	9	26	1 <sup>2/</sup>
1976	140	20	14	26	2 <sup>2/</sup>
1977	145	52	35	27	27
1978	141	61	43	50	38
1979	140	56	40	73	21
1980	141	12	8	32	1
1981		23		4	20
1982	235	8	3	13	15 <sup>3/</sup>
1983 <sup>4/</sup>	216	9	4		

<sup>1/</sup>These numbers make no allowance for wastage.

<sup>2/</sup>ADC bought 7,000 metric tons of sorghum from commercial sources in 1975 and again in 1976. In 1975 ADC received 6,000 metric tons obtained on concessional terms.

<sup>3/</sup>ADC reported actual sorghum inventories on 31 Dec. 1982.

<sup>4/</sup>Jan. - June only.

Source: The Agricultural Development Corporation. Production figures from Appendix, Table A-1.

STATISTICAL APPENDIX

Table A-4-a

Somalia: ADC Beginning and Ending Stocks, Purchases, Inter-District Transfer, and Sales of Red Sorghum, 1978<sup>1/</sup>

(Thousands of Metric Tons)

District	Stock 31 Dec 77	Purchased Local Pro- duction	Inter-District Transfers <sup>3/</sup>		Local Sales	Stock 31 Dec 78
			In	Out		
(Mogadishu) Xammar	3.9					
Shalambut	.3	.2	51.2M	36.4	5.8	12.9
Afgoi	.8	1.6		1.8	1.6	1.1
W/Weyn	1.5	1.8		2.1X	.1	.2
Baaraaw	.1	1.3		2.8X	.1	.3
Baydhaba	8.2	13.8	.4M		1.8	.1
Diinsoor	4.0	10.2	29.0	31.7X	6.6	12.7
Q/dheere		12.6	.1	13.3X		1.0
B/dheere	2.9	8.5		12.1X		.5
Xudur	.3	.1	2.0M	8.3X		3.1
Kismaayo			.1M		2.0	.4
Jelib	.1				.1	
Saakow	.1	4.8	1.0	.1		
Jowhar	.9	1.0	1.2	2.8X	2.2	.8
Balcad	.5	.2		1.5X	1.6	
B/Weyn	.2			.7X		
B/Burti	.1	.4	5.2M		5.2	.2
Jalalaqsi	.1		2.1M		2.4	.2
Dh/Mareeb	.1		.4M		.4	.1
G/Kacyo			5.0M		4.5	.5
Garowe	.1		3.4M		3.3	.1
C/gaabo		1.5	1.6M		1.4	.4
Burco					1.2	.3
Boosaaso			3.2M		2.7	.5
Hargeysa			1.5M		1.1	.4
			12.2M	1.3	10.2	.7
Total	27.72 <sup>1/</sup>	61.52 <sup>2/</sup>	124.0	112.9	54.42 <sup>2/</sup>	38.82 <sup>2/</sup>

<sup>1/</sup> In the columns, amounts under 0.05 tons were rounded down and omitted. Rounding errors and transfers to Settlements keep totals from adding up.

<sup>2/</sup> Not quite consistent with Appendix Table A-3-b.

<sup>3/</sup> The X's and M's identify net importers and net exporters.

Source: Agricultural Development Corporation annual statement.

STATISTICAL APPENDIX

Table A-4-b

Somalia: Purchases, Inter-District Transfers, Sales, and Beginning and Ending Stocks of Red Sorghum, Jan. -Jun. 1983<sup>1/</sup>  
(Thousands of Metric Tons)

District	Stock 31 Dec 82	Purchased Local Production	Inter-District Transfers <sup>2/</sup>		Local Sales	Stock 30 Jun 83
			In	Out		
Hargeisha						
Qardho			.1M		.1	
Garewe	.1		.1M		.1	
G/Kacyo	.1		.1M		.1	
Dh/Mareb	.1		.1M		.1	
B/Weyn			.1M		.1	
B/Burte	.1	.1				
Jalalaqsi			.1M			
Jowhar					.1	
Balad						
Mogadishu			2.2M	1.3	.6 <sup>3/</sup>	.2
Sinay			.8M		.8	
Qoryoley						
Afgoye	.1					
W/Weyn	.5				.1	.4
Bay	1.2	1.8	4.4M	2.1	2.9	2.2
Dinsor	1.9	.6		.6X	.3	1.6
Q/Dhere	2.9	3.0		2.4X	.6	2.3
B/Hakab	.5	.2			.3	.4
Xudur	.1		.2M		.2	.1
Wajid						
Buaalf						
Garbanarf			.2M		.2	
B/Dhere	6.5	2.0		1.4X	.3	6.8
Sakowi	3.6	1.4		.7X	.2 <sup>3/</sup>	4.0
Totals	17.7 <sup>4/</sup>	9.6	8.5	8.5	7.5	18.0

<sup>1/</sup> In the columns, amounts under 0.05 tons were rounded down and omitted. Rounding down errors and transfers to Settlements keep totals from adding up.

<sup>2/</sup> Not quite consistent with Appendix Table A-1-b.

<sup>3/</sup> Transferred to Settlements.

<sup>4/</sup> Not quite consistent with A-3-b.

Source: Agricultural Development Corporation Annual Statement.

## STATISTICAL APPENDIX

Table A-4-c

Somalia: ADC Purchases, Inter-district Transfers, and Sales, and Beginning and Ending Stocks of Maize, 1978.<sup>1/</sup>

District	Stock 31 Dec 77	Purchases	Transfers <sup>2/</sup>		Sales	Stock 31 Dec 78
			In	Out		
Xammar (Mogadishu)	12.2	12.1	10.5	8.2	23.6	3.0
SH/Bot	.1	1.4	3.0M	2.2	1.6	1.6
Afgooye	1.1	1.2		.7 X	1.0	.7
Qoryoley	2.0	5.4		5.1 X	1.1	1.2
Audheegle	.4	.7		.6 X	.0	.4
W/Weyn	.0					
Baraawe	.0	.0		.0	.1	.4
Baydowa			.3 M	.1	.2	
B/Hahaba						
Diinsoor						
Q/dheere						
Xudur						
B/dheere						
Kismaayo	3.5	8.7	.1	3.6 X	3.6	5.1
Jamame		.6		.2 X	.1	.4
Boaale		.3		.3 X		
Jilib	.2	.1	.4 M		.7	
Saakow	.1	.1			.2	.1
Jowhar		.1	1.0 M	.1	1.0	.0
Balcad	.4	.2	.4 M	.1	.8	.0
B. Weyne			.3 M		.3	
B/Burti			.2 M		.2	
Jalalagsi						
Dh Wareeb						
G/Kacyo			.7 M		.7	
Garoowe						
C/Gaabo						
Burco	.1		.8 M		.2	.6
Boosaaso	.1		.3 M		.4	
Hargeeysa	.5		.7 M	.4	.7	.2
Total	24.8	31.2	17.6	22.3	37.9	13.4

<sup>1/</sup> In the columns, amounts under 0.05 tons were rounded down and omitted. Rounding errors and transfers to Settlements keep totals from adding up.

<sup>2/</sup> Not quite consistent with Appendix Table A-1-b.

Source: Agricultural Development Corporation Annual Statement

STATISTICAL APPENDIX

Table A-4-d

Somalia: ADC Purchases, Inter-District Transfers and Sales, and Beginning and Ending Stocks of Maize, Jan. - Jun. 1983<sup>1/</sup>

(Thousands of Metric Tons)

District	Stock 31 Dec 82	Purchased Local Production	Inter-District Transfers <sup>2/</sup>		Local Sales	Stock 30 Jun 83
			In	Out		
Hargeysa	1.2			.4	.7	.1
Burco			.4M		.4	
C/gaabo						
Qardho			.1M		.1	
Garowe			.1M			
G/Kacyo						
Dh/Mareeb	.1					.1
B/Weyn						
B/Burti	.2				.1	
Jalalaqsi						
Jowhar					.1	
Balgad	.2		.2M		.2	.1
Mogadishu	4.8		3.1M	4.1	3.3	.4
Sinay			.6M		.3	.5
Sh/Bot	.2		.7M		.3	.5
Barawe	.1		.3M		.2	.1
Qoryoley	.5	.1	.1M	.3	.3	.2
Awdhegale	.3				.3	
Afgooye	.1		.6 M		.6	.1
W/Weyn	.1				.1	
Baydhabo	.1		.4 M		.3	.2
Xuqur						
Buaale		.1			.1	
Jelib	.3				.3	
Sakow						
Kismayo	6.9			1.1	1.8	3.2
Jamaame	.3				.3	.1
G/Hareey						
B/Dhuubo						
Total	16.1	0.3	6.0	6.0	9.4	5.7

<sup>1/</sup>In the columns, amounts under 0.05 tons were rounded down and omitted. Rounding errors and transfers to settlements keep totals from adding up.

<sup>2/</sup>The X's and M's identify net importers and net exporters.

Source: Agricultural Development Corporation annual statement.

STATISTICAL APPENDIX

Table A-5

Somalia: Capacity of ADC Warehouses

<u>District</u>	<u>Net Flow*</u>	<u>Numbers of Buildings</u>		<u>TOTAL (tons)</u>
		<u>Flat Storage</u>	<u>Underground Storage</u>	
Xamar	(-)	11	1 (1,400)	48,000
Kismayo	(-)	5	2	12,000
Jamaame	(-)	4	-	10,000
Jilib	(-)	1	1	1,200
Bualle	(-)	1	-	--
Saakoow	(-)	3	-	1,500
B/Dheere	(+)	2	-	4,000
Diinsoor	(+)	3	2	4,000
Ufurw	(+)	2	2	1,800
Q/Dheere	(+)	2	1	1,500
Baydhabo	(+)	4	2	12,000
B/Hakabo	(+)	1	3	3,500
Xudur	(-)	1	-	1,000
Waajid	(-)	1	-	300
K/Waarey	(-)	2	-	3,000
W/Weyn	(+)	2	3	2,500
Afgooye	(+)	4	-	4,000
Awdheegle	(+)	2	-	1,000
Qoryoolay	(+)	7	-	6,000
Shalambood	(+)	5	1	13,500
Sablaaie	(-)	2	-	3,000
Baraawe	(-)	2	-	5,000
Balcad	(+)	3	-	3,000
Jowhar	(+)	3	-	5,000
Mahaday	(+)	2	-	3,000
B/Burte	(-)	1	-	800
Jalalqsi	(-)	1	-	800
B/Weyne	(-)	1	-	800
DH/Marreb	(-)	1	-	800
Gaalkacyo	(-)	1	-	800
Garowe	(-)	1	-	800
Qardho	(-)	1	-	300
Ceerigaabo	(-)	1	-	500
Eurco	(-)	1	-	1,000
Hargeysa	(-)	3	-	5,500
		<u>82</u>	<u>16**</u>	<u>166,900</u>

\* (+) Net surplus areas; (-) net deficit areas, for some period unspecified.

\*\*About 250-300 tons each except in the Mogadishu (Xamar) District.

Source: ADC

STATISTICAL APPENDIX

Table B-1

Somalia: ADC Purchase and Selling Prices  
1971 - 1983  
(Shillings per 100 Kilograms.)

Calendar Year	<u>Maize</u>		<u>Sorghum</u>			
			<u>Red</u>		<u>White</u>	
	Purchase	Selling	Purchase	Selling	Purchase	Selling
1971	35	55	40	60	40	60
1972	35	55	40	60	40	60
1973	45	65	45	65	45	65
1974	50	70	50	70	50	70
1975	55	75	55	75	55	75
1976	60	80	60	80	60	80
1977	75	90	75	95	75	95
1978	75	95	75	95	75	95
1979	75	95	75	95	75	95
1980	120	180	120	180	120	180
1981	180	250	150	220	160	230
1982	180	250	150	220	160	230
20 Jul 83	220	325	160	265	180	285

Source: The Agricultural Development Corporation.

STATISTICAL APPENDIX

Table B-2

Somalia: ENC Selling Prices for Flour and Rice.

1979 - 1983

(Thousands of Metric Tons)

Prices in shillings per 100 Kilograms

<u>Calendar</u> <u>Year</u>	Flour Price	Rice Price	<u>Quantity Received</u>	
			<u>Flour</u>	<u>Rice</u>
1979	276	495	54	76
1980	276	495	53	62
1981	373	495	55	42
1982	726	839	16	41
1983	884	961 <sup>1/</sup>	15 <sup>2/</sup>	42

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<sup>1/</sup>In June 1983, ENC raised its selling price to 961 shillings per kilo of rice for both Italian and American rice. Because this year's receipts of American rice have been decidedly inferior, ENC lowered the price of the American rice to 798 shillings in October in order to move it. On 6 December 1983, ENC had 3,000 tons of rice and no flour in stock.

<sup>2/</sup>for 1 January - 25 October.

Source: ENC

STATISTICAL APPENDIX

Table B-3

Somalia: Pasta Factory Output and Buying  
and Selling Prices.

1980 - 1983

(Quantities in Metric Tons)

Prices in shillings per 100 Kilograms

<u>Year</u>	<u>Month of Price Change</u>	<u>Purchase price of Wheat</u>	<u>Pasta Output (tons)</u>	<u>Selling Prices</u>			
				<u>Spaghetti</u>	<u>Macaroni</u>	<u>Flour</u>	<u>Bran</u>
<u>1980</u>	Jan.	115 sh	10,251	600 sh	500 sh	250 sh	230 sh
	April	121		700	400	250	230
	Sept.	208					
<u>1981</u>	Jan.	172	8,619	700	425	250	230
<u>1982</u>	Feb.	114	4,030	700	425	250	230
	Mar.	120					
	Nov.	379					
<u>1983</u>	Jan.	421	5,923 <sup>1/2</sup>	850	470	250	250
	April			925	525	450	350
	Sept.			1,075	650	600	400

<sup>1/2</sup> For January through June.

Source: The Pasta Factory.

STATISTICAL APPENDIX

Table B-4

SOMALIA

OPEN MARKET RETAIL PRICES

(Converted to Shilling Values per 100 Kilograms)

August - November 1983

<u>Region/City and Date</u>	<u>Kilometers from Mogadishu</u>	<u>White Sorghum</u>	<u>Red Sorghum</u>	<u>White Maize</u>	<u>Sesame</u>	<u>Cowpea</u>
<u>Maize Regions</u>						
<u>Afgoi</u>	25					
Aug. 31		480			1,600	1,600
Sept. 7		600	500	780		
12			640	760	1,900	1,450
25		600	560	800	2,400	1,800
Oct. 8			600	780	2,000	1,600
24			700	850	2,100	2,100
Nov. 7		400	700	900	2,300	2,200
<u>Balad</u>	40					
Nov. 14			700	800	1,400	2,000
21		700	500	800	1,650	2,000
28			750	800	1,450	2,200
<u>Jowhar</u>	85					
Aug. 25				700		
<u>Janale</u>	100					
Aug. 20				1,000		
Sept. 8				570	1,908	
Oct. 3				500	1,800	1,000
10				550	1,800	1,200
17				500	1,800	1,000
27			700	850	2,800	1,000
<u>Mishani</u>	105					
Aug. 24				540		
<u>Bulo Shikh</u>	105					
Aug. 30				500		

(...continued)

STATISTICAL APPENDIX

Table B-4(Continued)

<u>Coriolie</u>	135					
Aug. 30				600		
Oct. 10				650	1,700	1,000
20				650	1,700	1,000
31				750	2,100	

<u>Sorghum Regions</u>						
<u>Wanlaween</u>	90					
Oct. 1			600	900	2,000	1,000
8			650	900	2,000	1,000
15			600	900	2,000	1,000
<u>Tortorow</u>	180					
Oct. 14		700	600	798		
<u>Bur Akaba</u>	200					
Oct. 7		684	548	798		
29		760	630	846		
Nov. 5		780	676	900		
<u>Luq Habar</u>	220					
Oct. 23		730	510	820		

Source: Agricultural Extension Service, retail prices collected by field extension agents asking prices but neither buying nor weighing. Price accuracy depends on retailers.

STATISTICAL APPENDIX

Table B-5

Somalia: Retail Grain Prices of Quantities Purchased  
in Regional Markets and Weighed.

(Shillings per Kilogram.)

<u>Market where Purchased</u>	<u>Kilometers from Mogadishu</u>	<u>Date of Purchase</u>	<u>White Maize</u>	<u>Quality estimation</u>	<u>Red Sorghum</u>
Afgoi	25	24 Nov	10.08	70%*	
Barire	35	25 Nov	7.44	75%, small kernels	
Balad	40	14 Nov	8.82	75%, small kernels	
				67%	8.78
				80%	7.78 (bakkar)
Malable	40	25 Nov	8.41	85%, small kernels	
			7.43 (bakkar)	60%	
Jowharr	85	14 Nov	8.00	95%	
Hawadley	60	15 Nov	9.17	90%+	
			7.05 (bakkar)		
Brava	200	26 Nov	7.00	50%	
			6.30 (bakkar)	60%	
B/akaba	200	21 Nov		40%	6.60
			8.88	85% shrunken	
Berdale	270	20 Nov		80%	5.23
Diinsoor	380	21 Nov		40%	4.36**
Jamaame	420	27 Nov	6.92	40% water damage	
Kismayo	500	27 Nov		90%	7.10
			7.67	85%	
			7.30	35% (yellow bakkar)	

\* Estimated portion of the grain that would germinate.

\*\* Bought from a Local Government retailer at the "fixed price" of 2.65 shillings per kilo, but short weighted.

Source: Study Team

## STATISTICAL APPENDIX

Table B-6

Somalia: Retail Prices of Grains and Grain Products  
 In Mogadishu, Jan. 1981 - Oct. 1983  
 (Shillings Per Kilo)

Year/Month	Maize		Sorghum		White Rice	Wheat Flour	Spaghetti	
	Domestic	Imported	White	Red			Domestic	Imported
<u>1981</u>								
January	7.46	6.35	10.31	8.00	6.10	3.10	9.90	16.00
February	8.17	7.41	10.00	7.60	6.00	3.10	10.00	18.00
March	8.43	7.34	10.10	7.75	7.08	5.99	10.30	21.00
April	9.59	7.22	11.35	8.30	9.00	3.35	10.90	21.00
May	9.61	4.70	11.00	7.69	13.76	4.10	11.00	21.00
June	6.46	3.85	19.33	13.56	14.11	6.45	12.92	19.80
July	5.95	3.78	8.56	6.11	16.83	8.06	16.47	20.00
August	4.13	2.94	6.67	4.59	15.00	7.60	11.22	20.00
September	4.11	2.94	5.34	3.28	16.80	5.20	12.00	24.00
October	2.75	3.00	5.88	3.94	14.97	6.25	12.00	24.00
November	4.22	2.64	9.34	5.39	18.73	4.93	12.00	23.33
December	4.11	2.78	8.22	4.17	15.43	5.25	11.43	14.00
<u>1982</u>								
January	4.86	3.15	8.07	3.57	14.31	5.25	12.11	25.33
February	4.95	3.66	7.80	3.61	17.06	6.00	15.00	23.83
March	5.09	3.64	8.05	3.56	16.11	6.00	15.71	24.17
April	5.20	3.72	6.95	3.50	12.50	6.33	13.00	25.50
May	5.22	3.64	7.28	3.56	12.67	7.13	N/A	25.10
June	5.50	3.69	7.57	3.85	12.71	7.09	N/A	26.00
July	6.29	3.64	7.65	3.86	11.64	6.64	18.00	24.00
August	5.35	3.44	7.20	3.73	10.67	7.25	N/A	21.58
September	4.73	3.22	6.57	3.96	8.29	7.72	13.00	23.00
October	5.40	3.09	7.00	4.00	10.33	10.40	11.00	24.38
November	4.84	2.86	7.06	4.06	N/A	10.00	12.00	20.70
December	5.95	3.09	7.69	4.50	10.00	10.00	12.00	18.00
<u>1983</u>								
January	5.00	N/A	6.53	4.00	11.11	10.00	12.00	18.00
February	5.35	N/A	6.07	4.11	14.00	10.00	16.00	18.00
March	6.55	N/A	6.65	4.50	15.75	10.00	15.00	18.22
April	7.96	N/A	6.90	4.38	16.78	10.00	17.00	21.00
May	9.25	N/A	8.16	5.39	17.10	10.33	15.89	24.44
June	10.35	N/A	8.20	5.75	16.22	12.10	17.10	28.67
July	11.00	N/A	8.38	6.19	16.50	12.45	20.00	32.11
August	10.45	N/A	9.00	6.15	16.10	12.53	24.67	33.73

Source: Central Statistical Department, Ministry of National Planning

STATISTICAL APPENDIX

Table B-7-a

Somalia: Wholesale and Retail White Maize Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kilograms)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	700	-	700	850	700	900
Selling	900	-	800	950	900	950
<u>Retail*</u>						
Buying	900	1260	700	950	900	950
Selling	950	1300	900	1000	1000	1000
<u>Markups</u>						
Wholesale	200	-	100	100	200	50
Retail	50	40	200	50	100	50
Wholesale buying price to retail price	: 250		200	150	300	100

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-b

Somalia: Wholesale and Retail Yellow Maize Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kilograms)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying			600	560	600	560
Selling			720	620	700	620
<u>Retail*</u>						
Buying	680	600	600	620	650	600
Selling	750	720	750	660	750	700
<u>Markups</u>						
Wholesale			120	60	100	60
Retail	70	120	150	40	100	100
Wholesale buying price to retail price :			150	100	150	140

Maize is sold at retail in units of roughly 670 and 2,500 grams.  
Table converts the prices of those units into prices per  
100 Kilograms

Source: The Survey Team

STATISTICAL APPENDIX

Table B-7-c

Somalia: Wholesale and Retail White Sorghum Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kiloqram)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	EAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	950	-	1000	1200	900	1200
Selling	1050	-	1100	1240	1000	1240
<u>Retail*</u>						
Buying	1100	1100	900	1240	1100	1240
Selling	1200	1200	1000	1280	1200	1280
<u>Markups</u>						
Wholesale	100		100	40	100	40
Retail	100	100	100	40	100	40
Wholesale buying price to retail price : 250			0	80	300	80

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-d

Somalia: Wholesale and Retail Red Sorghum Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kilogram)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	600	-	780	600	500	560
Selling	700	-	1000	700	600	600
<u>Retail*</u>						
Buying	720	1120	800	600	600	600
Selling	764	1164	900	750	680	700
<u>Markups</u>						
Wholesale	100		220	100	100	100
Retail	44	44	100	150	80	100
Wholesale buying price to retail price	: 164		120	150	180	160

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-e

Somalia: Wholesale and Retail Wheat Flour Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kilogram)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	930	-	937	1040	980	966
Selling	1000	-	1010	1080	1060	1060
<u>Retail*</u>						
Buying	1060	1100	1000	1060	1140	1060
Selling	1300	1200	1200	1200	1200	1300
<u>Markups</u>						
Wholesale	70		73	40	80	94
Retail	240	100	200	140	60	240
Wholesale buying price to retail price :	370		263	160	220	334

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-f

Somalia: Wholesale and Retail Domestic Spaghetti Prices  
in Six Mogadishu Markets, 5 December 1983

(Shillings per Carton of 10 Kilogram)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	240	-	240	240	240	260
Selling	250	-	250	260	250	265
<u>Retail</u>						
Buying	260	260	260	260	250	265
Selling	270	280	270	280	270	280
<u>Markups</u>						
Wholesale	10		10	10	10	5
Retail	10	20	10	20	20	15
Wholesale buying price to retail price :	30		30	40	30	20

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-g

Somalia: Wholesale and Retail Imported Spaghetti Prices  
in Six Mogadihsu Markets, 5 December 1983.

(Shillings for Carton of 10 Kilograms)

Price	Name of Market					
	SCIBIS	TOWFILQ	S.BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	280	-	280	280	280	280
Selling	300	-	300	300	290	300
<u>Retail</u>						
Buying	300	290	290	300	290	300
Selling	320	320	320	320	300	320
<u>Markups</u>						
Wholesale	20	-	20	20	10	20
Retail	20	30	30	20	10	20
Wholesale buying price to retail price : 40			40	40	20	40

Source: The Survey Team.

STATISTICAL APPENDIX

Table B-7-h

Somalia: Wholesale and Retail Rice Prices in Six  
Mogadishu Markets, 5 December 1983

(Shillings per Quintal of 100 Kilograms)

Price	Name of Market					
	SCOBIS	TOWFIIQ	S. BACAAD	BAKAARAHA	WABERI	MEDINA
<u>Wholesale</u>						
Buying	1042	-	1030	1060	1100	1080
Selling	1100	-	1060	1100	1160	1160
<u>Retail*</u>						
Buying	1100	1100	1100	1100	1160	1100
Selling	1200	1150	1200	1150	1300	1200
<u>Markups</u>						
Wholesale	58	-	30	40	60	80
Retail	100	50	100	50	140	100
Wholesale buying price to retail price	: 158		170	90	200	120

\* Grain is sold at retail in units of roughly 670 and 2,500 grams. This Table converts the prices of those units into prices per 100 Kilograms

Source: The Survey Team.

Table B-8

Somalia: Official ADC Prices of Maize and Red Sorghum per Quintal and the Real Prices, for 1973-1983 inclusive, and the Parity Price for 1983

Year	CPI	Maize			Sorghum		
		ADC Buying Price	Real Price	Real Price Index	ADC Buying Price	Real Price	Real Price Index
1973	100.0	42sh	42sh	100.0	42sh	42sh	100.0
1974	118.34	50	42.25	100.6	50	42.25	100.6
1975	141.28	55	38.93	92.7	55	38.93	92.7
1976	161.07	60	37.25	88.7	60	37.25	88.7
1977	178.23	75	42.08	100.2	75	42.08	100.2
1978	196.1	75	38.25	91.1	75	38.25	91.1
1979	242.64	75	30.91	73.6	75	30.91	73.7
1980	386.60	120	32.24	73.9	120	31.04	73.9
1981	558.3	180	32.24	76.76	150	26.80	63.9
1982	690.6	180	26.06	62.05	150	21.72	51.7
1983*	773.5	220	28.44	67.71	160	20.69	49.3
If 12% inflation in 1983							
		Nov. Market Price			Nov. Market Price		
1983	773.5	850sh	109.9sh	261.64	650sh	84sh	200.01
		Parity			Parity		
1983	773.5	325sh	42sh	100.0	325sh	42sh	100.0
If 24% inflation in 1983							
		Nov. Market Price			Nov. Market Price		
1983	856.3	850sh	99.3sh	263.33	650sh	75.9sh	180.74
		Parity			Parity		
1983	856.3	360sh	42sh	100.0	360sh	42sh	100.0

\*Assuming a 12 percent inflation in 1983.

Source: Appendix Table B-1 and the Central Statistics Division of the Ministry of National Planning.

ANNEXES

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Outline Terms of Reference: September 1983

- A. What crops: Cereals, food grain, pulses and cotton.  
Not sugar, bananas, or livestock.
- B. What areas: Shebelli/Juba Valleys. Major rainfed crop producing areas including Bay Region and NW (Hargeisa).
- C. Major questions
- (i) How to re-establish private trade? What support? What regulation is necessary to re-establish a free market?
  - (ii) What will be the role of ADC, if any? How should state farm production be marketed?
  - (iii) Domestic prices will be fixed in an open market - but will be influenced by the sale prices and magnitude of imports. How should these parameters be determined? Who imports and distributes private, public? How does one protect producers and consumers from short term fluctuation on the world market? What should be the level of security storage, including on-farm storage?
- D. Information required:
- (i) How the present marketing system functions. Role of private, public prices to farmers and consumers. Adequacy and ownership of storage and transport. Seasonal price variation.
  - (ii) How are imports handled and distributed. Prices.

- E. Assumption: Underlying this is the assumption that GOS favors a return to private marketing with minimal Government interference to assure efficiency and food security.
- F. Method of analysis: Assemble published information. Field observation. Discussion with farmers, traders, official interaction within mission and with government.
- G. Composition: GOS, Ministry of Agriculture, University of Somalia, Berg/Batchelder, World Bank Agriculturalist, USAID
- H. Time & Timing: 1 week data collection.  
3 weeks in field.  
1 week report writing and discussions.  
1 week reserve.  
  
6 weeks (approximately Oct. 15 - Nov. 25).
- I. Output: Aide-memoire including:
- Operational Recommendations with respect to policy and institutional issues.
  - Background Information with respect to item D above.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Applicable Law

I. LAW No. 51 of 22 July 1971

State control of the purchase sale and distribution of maize and sorghum.

THE PRESIDENT

OF THE SUPREME REVOLUTIONARY COUNCIL

HAVING HEARD the Council of Secretaries;  
TAKING NOTE of the approval of the Supreme Revolutionary  
Council;

HAVING FELT the necessity to protect the interest and well-  
being of the producer and consumer, and eradicated the deplorable  
exploitation system of man by man;

HEREBY PROMULGATES

the following Law:

Art. 1

1. The Ministry of Agriculture shall be the sole organ author-  
ized to purchase, sell and distribute maize and sorghum consumed  
throughout the territory of the Somali Democratic Republic.

2. The Agricultural Development Corporation (ADC) shall  
under the direction of the Secretary of State for Agriculture,  
exercise the power to trade, store, import and export maize and  
sorghum.

Art. 2

1. The Agricultural Development Corporation shall, through  
its regional centres or representatives, make the necessary arran-  
gements for purchase, storage, sale, and distribution of maize  
and sorghum in all regional administrative headquarters.

Art. 3

1. The Ministry of Interior shall, through the competent  
district authorities, be responsible for the storage, safe and  
distribution of maize and sorghum in the district centres, town-  
ships and villages as the case may be.

Art. 4

1. The local Government in each district shall form a retail cooperative and may include any Somali citizen permanently residing in the district to be a member of the cooperative.

Art. 5

1. The Secretary of State for Agriculture shall by decree fix producer, wholesale and retail prices for sorghum and maize for every season in consultation with the General Manager of the Agricultural Development Corporation.

Art. 6

1. The purchase, storage, sale and distribution of maize and sorghum by private persons for commercial purposes is hereby prohibited.

2. Notwithstanding the provisions of paragraph 1 of this Article, a producer is authorized to store for domestic use upto one hundred kilos of maize or sorghum per season for each member of his family.

Art. 7

1. Whoever contravenes the provisions of article 6 above shall, depending on the gravity of the offence, be liable to have his commodities confiscated and a fine upto So. Sh.10,000 or to imprisonment upto three years or to both such fine and imprisonment.

Art. 8

1. Regulations for the implementation of this Law shall be issued by decree of the President of the Supreme Revolutionary Council on the proposal of the Secretary of State for Agriculture.

Art. 9

1. Any law or provision contrary to or inconsistent with this Law is hereby abrogated.

Art. 10

1. This Law shall come into force immediately. It shall be included in the Official Compilation of laws and decrees of the Somali Democratic Republic.

2. All persons shall be required to observe it and cause others to observe it as a law of the State.

Maj. Gen. Mohamed Siad Barre  
PRESIDENT  
of the Supreme Revolutionary Council

II. The Presidential Circular of 9 August 1982

(Unofficial translation)

SOMALI DEMOCRATIC REPUBLIC  
THE PRESIDENCY  
OFFICE OF THE PRESIDENT

REF/JDS/XM/E/4-1920/82

Mogadishu, 9th August 1982

SUBJECT: GATHERING, SAFE-GUARDING  
AND STORING FARM CROPS

We have reached the time of the Gu harvest and should prepare to gather, safeguard, and store this harvest. As you are already aware, production of these crops, of which the Somali nation has a great need, has been expanded during this season in many regions of the country, including the Lower Shabelli, Central Shabelli, Lower Juba, Central Juba, Bay, Bakol, Hiran, and Northwest. As the Somali people have done their part in a campaign to raise production of agricultural crops, it is proper that progressive steps should be taken to assure efficient gathering, safeguarding and storing of these crops. These steps should be taken to permit optimal use of these crops both at the time of harvest and for future needs. We must not tolerate any mis-use of crops that have cost the Somali people so much precious time and labor. Therefore, in order to fulfill this order, all agencies to which this letter is addressed are instructed to take all steps necessary to fulfill its purposes. In particular, the Agricultural Regional and District Party Committees are instructed to conduct a comprehensive national campaign to gather agricultural crops -- which means giving full support to the ADC, to help it with a task that ADC alone cannot administer. This campaign of crop gathering is to be based on self-help schemes. In order to succeed in this great task and to save on expenses that could burden the ADC budget, responsibility for this campaign is distributed among the following committees:

1. The Supervisory Committee which consists of:
  - (a) Regional Party Committee Secretary,
  - (b) Officer Commanding Regional Police Division,
  - (c) Officer Commanding Regional NSS,
  - (d) Secretary of the Party District Committee,
  - (e) Commanding Officer of the Party District Police Station,  
and
  - (f) District Officer of the NSS;

2. The Regional Crop Gathering Committee which consists of:
  - (a) Regional Coordinator of the ADC,
  - (b) Regional Coordinator of the Ministry of Agriculture, and
  - (c) Regional Representative of the Somali Youth League;
3. District Gathering Committee which consists of:
  - (a) District ADC Administrator,
  - (b) District MOA Administrator, and
  - (c) Representative of the Somali Youth League District Office.

These committees shall fulfill their duties in accord with the following instructions:

- (i) They must organize and implement a crop-gathering campaign that will fully support farmers in their work to protect the crops after the harvest.
- (ii) Crops shall not be taken by force from the farmers.
- (iii) Farmers should be well treated and when they bring crops to the selling stations they should be promptly paid cash if the amount is not more than that due them on one quintal (or 100 kilos).
- (iv) Weighing should be performed accurately by both sides, by ADC and by the farmers.
- (v) ADC should not buy crops that have been spoiled during storage, or those that have been eaten by pests, are wet, or are covered by dirt or mud.
- (vi) Selling stations should mark identifying numbers on their sacks to permit identification of the buying stations. (This will help ADC enforce the provisions of (v) above.
- (vii) Buying posts should be restricted to districts and big villages in which each station will be able to buy at least 50 quintals daily.
- (viii) Agents, who are to buy crops for the Agency, should be trustworthy and honest people, who will safeguard cash and grain in their possession, and who will take care that mistakes that occurred in the past shall not be repeated.

AGRICULTURAL DEVELOPMENT AGENCY

The ADC is responsible for providing each selling station with money, sacks, weighing machines, drums, and all the equipment that may be needed in the selling station.

RESPONSIBILITY OF THE SC & SB

The Somali Credit and Savings Bank is responsible for providing overdraft facilities that permit ADC easily to obtain the cash it needs to buy crops.

MINISTRY OF NATIONAL TRANSPORT

The Ministry of National Transport is responsible for providing extra transport, if requested by ADC, for fulfilling national needs during the harvest time, and, if needed, for collecting the crops from the selling stations and bringing them to ADC Regional and District headquarters. Fuel and other expenses will be paid for by ADC.

NATIONAL PETROLEUM AGENCY

The Agency is instructed to give priority to grain trucks while the harvest is in progress.

AUTHORITY OF CROP GATHERING COMMITTEE

The Crop Gathering Committee has authority to assign all transport vehicles to carry crops from the buying stations, so that the expenses to be included in the selling price are kept low. If necessary, they may hire private vehicles. Further, they have the authority to take steps against anyone or anything hindering the gathering of crops. They are also responsible for protection of the money collected from the buying stations.

MAKING OF STORES

In order to find suitable storage places, the Crop Gathering Committees are instructed to make use of self-help schemes drawing on the experience of old Somali farmers while following these rules:

- (a) Each store must be able to hold at least 5,000 quintals,
- (b) Each is to be built on high ground to avoid water seepage, and
- (c) Each should be made by experts who know the correct way to store grain by traditional, time-tested methods.

ORGANIZING BUREAU

The Organizing Bureau of the SRSP should supervise the implementation of these instructions. It should make use of Party Supervisors and should make sure all of the harvest is stored safely and that none of it passes into the hands of the nation's enemies.

SECURITY COMMITTEE

The Regional and District Security Committees shall cooperate with the Security Agencies (police, NSS, and militia) to make sure that the crops do not fall into enemy hands. Any person involved in such activities, shall be taken into custody and prosecuted.

STATISTICS

In order to provide a clear record of the country's production and sale of crops, the ADC should, once a month, send to the Ministries of Agriculture and Finance reports of the number of purchases of crops by category, and the value of those purchases.

MINISTRY OF DEFENSE

ADC shall administer this work at the national level. Therefore, the Somali National Forces, wherever they may be, when asked, help in transport during this Gathering-of-the-Crops campaign. If the National Defense Forces require transportation assistance, they can ask the Ministry of Agriculture and the Director General of ADC to help them.

SPECIAL POINTS

ADC should reuse old sacks and should avoid the need to buy new ones.

ADC should sell old crops now in ADC stores to traders. The money collected should be used to repay the advances provided by the Somali Credit and Savings Bank.

The ADC should not neglect any property in its possession.

CONCLUSION

Lastly, ever aware of the threats of our enemies, I wish to encourage the Crop Gathering Committees to move swiftly and efficiently in this campaign and to complete it quickly, and at the same time to respect the farmers and the ADC so the size of the task may be kept to a minimum.

---

Mohamed Siad Barre  
President of the Somali  
Democratic Republic

SOMALIA  
INCENTIVES AND GRAIN MARKETING STUDY

Notes on Grain Markets

Mohamud A. Asser and Mohamed Khalif Sh. Yusuf

A. Market Participants

Mogadishu's grain retailers.

3.01 Most Mogadishu households buy their grain in a series of small quantities from retailers in their "village". Although no physical barriers mark the borders, the residents of Mogadishu see their city as divided into distinct "villages". There are 16 of these villages, each with a "local government" of Ministry of Local Government civil servants, and each with one retail grain market. The Scibis Market can be taken as representative of the 16. In it, some 40 hawkers sell maize, sorghum, beans, and sesame. Some 80 sell sugar, cooking oil, flour, rice, and pasta. The physical facilities of the people retailing domestic crops are very modest, a few poles in the ground to support a canopy, and a few sacks of grain. The people retailing imported commodities usually utilize a small building. Each morning, a tax collector from the Local Government collects 5 shillings from the maize and sorghum retailers and 7 shillings from the rice and flour retailers. The latter must pay several hundred shillings each year for a license. Maize and sorghum retailers need no license. There are no other obstacles to entry into grain retailing. Wholesalers rarely provide retailers with credit, but since retailers can begin with as little as a half bag of grain, the capital required for entry into retailing is small. The maize and sorghum retailers

ANNEX III

Page 2

reported average daily sales of between 60 and 80 kilos with a markup of 20 to 30 shillings between purchase and selling prices.

Mogadishu's grain wholesalers.

3.02 Although each of Mogadishu's 16 "villages" has a retail grain market, only six have wholesale grain markets. Using the Scibis Market as representative, it has 16 wholesalers trading in imported commodities (rice, sugar, pasta, flour, coffee) and 6 wholesalers trading in maize, sorghum, and beans. Most Mogadishu wholesalers specialize in this way, though a few do trade in both domestic and imported grain. The wholesalers must pay some 1500 shillings a year for a licence, and they must also pay Local Government 3 to 5 shillings a quintal (depending on the commodity) on all grain when it is delivered to their warehouses. All Mogadishu wholesalers use masonry buildings (that are open to insects at the eaves or through other ventilation holes). Capital costs of entry into grain wholesaling are high, but licences are available to anyone willing to pay the licence fee, and there appear to be no other barriers to entry of new people. In November of 1983, several wholesalers visited by the team had visible inventories worth over \$100,000 U.S. at the official exchange rate. Although this did not seem to be the practice in Mogadishu, Kismayu wholesalers report storing grain in many warehouses.

3.03 Both wholesalers and retailers seem to speak of sacks of grain as though all contained either 50, or 60, or 100 kilos when full. But most sacks are not weighed when being filled, and, at the least, sacks of maize and sacks of sorghum of equal volume will usually have different weights. Further differences in levels of

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filling and in grain quality will also affect weights. Therefore, no conclusions about price per kilo should be based merely on number of sacks. Also, as in most LDCs, sacks are reused again and again; so the lettering on a sack ordinarily tells nothing about the origin of the contents.

3.04 Both wholesalers and retailers assert that prices change often depending on changes in quantities available. Some retailers say that to get better prices they sometimes go to wholesalers outside their own market.

3.05 In Mogadishu, as throughout the country, some three-fourths of retailers are women while most wholesalers are men. But in Mogadishu and in other towns, women often play an intermediate role in which, outside Mogadishu, they assemble for shipment, and, in Mogadishu, they go out to the villages to buy grain then bring it into the city for their own use as retailers. In both cases, the amounts involved at any one time add to less than a ton, too small to be called wholesaling, but quite large compared with the activities of most retailers. A few men also play these roles; but, at present, these activities appear to be a means by which women are expanding their operations beyond small retailing.

3.06 The men who are now wholesaling come from a variety of backgrounds. Some were handling other commodities then added grain when they learned that ADC and ENC were allowing private traders to enter the market. Some had wholesaled grain before ADC and ENC came into existence then dealt only in other commodities during the Government monopoly years then returned to the grain trade when Government drew back. Still others were working in the Gulf region when they learned that private grain trade had become permissible

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and might be profitable, and so they returned to apply their capital in trade.

3.07 When asked, "what would happen if ADC were abolished," maize wholesalers said that all the consequences would be wonderfully favorable. But most sorghum wholesalers (of whom there are few since relatively little sorghum is sold in Mogadishu) expressed concern that "big" traders would somehow raise prices to Mogadishu buyers. This contrast in merchants' attitudes parallels the contrast in Government practices between maize and sorghum growing regions.

The Government Agencies

3.08 The National Commercial Agency (ENC) comes under the Ministry of Commerce. Initially, its duties were to import all food into the country except maize and sorghum. That meant that the private sector was not permitted to import food. Because ENC was responsible for marketing imported food at Regional and District levels, it had stores and offices in all regions. Since June 1981, ENC has not imported any food commercially. But it continues to handle all rice and flour donated to Somalia. During the late 1970s, private importers used the franco valuta system to bring in flour, rice, and pasta. In 1980 some letters of credit were also sold by the Central Bank to private grain importers. ENC then occasionally exercised the right it still enjoys - but has not recently applied - of forced purchase, at c.i.f. cost, of private grain imports.

3.09 The Agricultural Development Corporation was established in 1971, as an agency of the Ministry of Agriculture. The original purposes of this Agency were a) to buy agriculture products from farmers at prices fixed panterritorially by the Government, with farmers forced to sell all their production to the ADC except for one quintal for every member of the family. The farmers were allowed neither to sell

their product to commercial businessmen nor to store and keep grain for their own future use; b) to sell grain at prices fixed panterritorially by the Government; c) to store grains for use in drought periods; d) to export the maize and sorghum grain in excess of the needs of the country; and e) to import if local grain production failed to satisfy the needs of the country.

To fulfil its duty, ADC established stores in all Regions of the country. As importer for maize and sorghum, ADC has handled all concessional imports of maize and, in at least four years, has brought in large amounts of maize bought in commercial markets (the tonnage numbers appear in Appendix Table A-3-a).

3.10 The Pasta and Flour Processing Factory comes under the Somali Development Bank. The factory receives all of its raw material, wheat, in the form of aid. Because quantity demanded has exceeded quantity produced by the pasta factory, private importers have bought foreign pasta not only at the official exchange rate but at parallel rates as much as double the official rate.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Potential Consequences of Concessional Assistance:

Depressed Grain Prices and Unearned Incomes

4.01 During 1979-82, concessional grain imports made up 26 percent of total Somali grain consumption and some 41 percent of marketed grain.<sup>1/</sup> The relatively large volume of these concessional imports raises the possibility that they reduced the market prices of maize and of sorghum. A second possible consequence of concessional grain imports is that they may have provided unearned incomes to individuals able to buy this grain from Government at below-market prices.

4.02 This Annex provides, in its second and third sections, suggestions as to the supply and demand theories that apply to the particular circumstances relevant to these matters of depressed prices and unearned incomes in Somalia. The first section of this Annex reviews the general theory regarding the effects of concessional grain imports. Readers familiar with that general theory should skip directly to Sections B and C on depressed prices and unearned incomes in Somalia.

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<sup>1/</sup>Table 2, page 10 of the Report, shows for these four years domestic production, 62%, commercial imports, 12%, and concessional imports, 26%. Assuming, with page 15 of the Report, that 40% of domestic production was marketed, then domestic marketings, commercial imports, and concessional imports were in the proportions 25/12/26; and the concessional imports comprised  $26 \div 63 = 41\%$  of the marketed total. If less than 40% of domestic production was marketed, then concessional imports made up more than 41% of marketed grain.

4.03 Those latter two sections reach two conclusions: first, that the grain and grain product component of the foreign assistance program has probably depressed domestic grain prices and discouraged grain production in Somalia. The second conclusion is that the Government's system of pricing has been delivering unearned income to selected individuals. This second conclusion may be of special significance because, in the past, some donor analysts have concluded that Government grain sales at low prices have provided subsidies to consumers. The analysis of this section concludes that the benefits from low selling prices have gone as unearned incomes to people other than ordinary consumers.

A. Potential Effects of Concessional Grain Imports

4.04 This section provides a survey of the possible effects of concessional grain imports on domestic grain prices and on the availability of unearned incomes. To keep the analysis simpler, the text first establishes a benchmark domestic grain price as it would be under conditions of free trade and freely fluctuating exchange rates.

4.05 Having identified this benchmark price, the first question will be, "does the grain component of a foreign assistance program tend to raise, lower, or leave unchanged this benchmark domestic price?" But before that question is addressed, the assumptions of free trade and of freely fluctuating exchange rates require some elaboration.

4.06 If Somalia were cut off from all other nations, and grain markets were free, some equilibrium price would prevail for each grain (this price would of course differ from time to time and, depending on transportation costs and direction of grain movements, from place to place). This would be autarchy, and we assume the equilibrium price in autarchy would be above the

equilibrium world price (i.e., Somalia would be a potential grain importer and not a grain exporter).

Free trade would lower grain prices.

4.07 If exchange markets were free and free trade prevailed, a grain's price would be determined by the c.i.f. import price plus transportation, transaction, and tax costs from port to buyers. The explicit assumption is that Somali purchases would be such a small portion of the world's total that they would have no effect on world grain prices. Then what effect could concessional grain imports have on domestic grain prices?

4.08 Figure IV-1 illustrates the three possible effects of grain aid on the domestic price of maize given other particular assumptions. The basic information in the Figure is represented by three lines:

$D_{\text{Somalia}}$ , Somali demand for maize,

$S_{\text{Somalia}}$ , Somali supply of maize, and

$S_{\text{World}}$ , world supply with free trade and a freely fluctuating exchange rate.

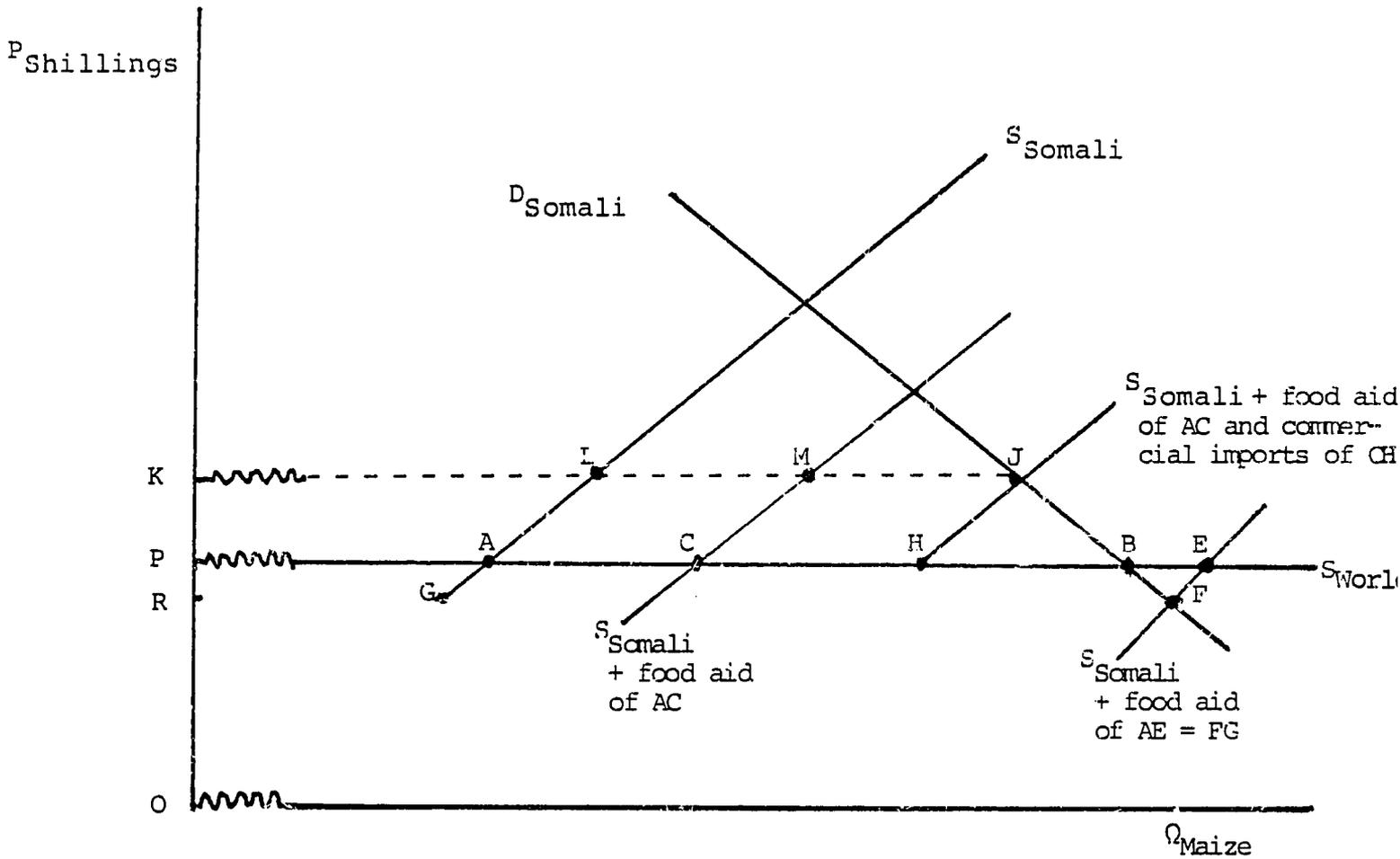
In this initial condition, all foreign aid is in the form of untied cash grants. The equilibrium maize price is OP, domestic production is PA, commercial imports (some paid for with aid money) are AB, and total consumption is PB (imports are greatly exaggerated in the Figure to allow room for the relevant illustrations. The wavy lines between P and A and on the x axis imply that the y axis is in fact far to the left of A).<sup>1/</sup>

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<sup>1/</sup> If a large foreign aid program is assumed to exist, D is greater, reflecting higher real income, than in the absence of that aid; and the foreign supply curve is greater (i.e., lower in the Figure) because the aid money has reduced the shilling price of foreign currencies and of foreign products. In this sense, import-competing grain farmers are damaged by foreign assistance regardless of the form it takes.

Figure IV-1

Illustrating Alternative Possible Effects of Grain Aid on Domestic Grain Prices



There are at least three alternative possible consequences of concessional grain imports and relevant Government policies.

No effect on the domestic price.

4.09 The quantity of maize given might be on the order of AC in Figure IV-1. Then a new supply curve would appear representing the Somali supply (GAS Somali) plus AC, the quantity of maize aid; this new supply curve would therefore be parallel to GAS Somali. The initial domestic price of OP would remain in effect. Those who wanted to import commercially would be able to do so but would import only CB instead of AB. Total imports would remain AB. The concessional grain imports, if a gift or loan, would save Somalia AC times OP shillings worth of foreign exchange but would not affect either price or total consumption (at least not in any way visible in partial equilibrium analysis).

Depressing the domestic price.

4.10 The quantity of maize given might be on the order of AE = GF in Figure IV-1. Then, the new supply curve would represent Somali supply (GAS Somali) plus AE = GF. Again the new supply curve would be parallel to GAS Somali. This aid quantity, in excess of previous commercial imports, AB, would force the domestic price down from OP to OR shillings. The drop in price would discourage domestic production, and it would fall from PA to FG. This condition can be identified where no one wants to import commercially.

With import restrictions raising the domestic price.

4.11 Finally, the quantity of maize given might again be on the order of AC, again giving the new supply curve through C parallel to GA. But in this case Government would refuse to allow commercial maize imports beyond the quantity CH. The effective Somali supply curve would then become the kinked line, GACHJ. Given the intersection of supply and demand at point J, the equilibrium price would rise to OK. Given greater incentives, domestic producers would raise their production from PA to KL; maize aid would equal LM (=AC); and commercial imports would

equal MJ (=CH). This condition would be characterized by queuing by people seeking import licenses for the quantity MJ. By improving the farmers' terms of trade, this third possibility would elicit greater domestic production; but it would result in unearned income for the lucky people permitted to import MJ. The size of that unearned income would be the quantity, MJ, times the price increase, PK.

Diverting unearned income to Government.

4.12 This unearned income of MJ times PK would be a threat to the integrity of the Government because it would tempt prospective importers to bribe the Government officials in charge of issuing the restricted volume of import licenses. The Government could capture the unearned income by imposing a tariff of PK. However, that could only be done accurately if both the unit import costs, OP, and the domestic price, OK, were known. Since both numbers are sure to change persistently, the tariff solution could never be "right" for long. Were it too little, private importers would continue (perhaps sharing, through bribes, with Government administrators) to receive unearned income. Were it too big, commercial imports would fall, and domestic prices would rise. Farmers would welcome this, but domestic consumers might object.

4.13 Alternatively, in this case, the Government could divide the permissible import quantity, into discrete units, e.g., of 1,000 tons, and could then auction them, e.g., using sealed bids once every 3 months, to private traders. To be sure of outbidding rivals, prospective bidders would have to offer nearly PK per unit, and the Government could collect nearly the full amount, MJ times PK. This method has been used successfully in India, Brazil, and some other LDCs.

Unearned incomes from concessional imports.

4.13 Unearned incomes also flow when Government attempts to subsidize consumers by selling concessional grain imports at

prices below the domestic equilibrium. The simplest example is shown in Figure IV-2 where there is no domestic production, e.g., of wheat flour, and all imports are provided concessionally by donor foreign aid programs.

4.14 Figure IV-2 shows wheat flour demand by Somali wholesalers at the port where they are assumed always to take title to flour. The Figure also shows a fixed quantity of foreign aid flour, OA, for some particular time period (for example, for 3 months). No flour is imported other than this amount.

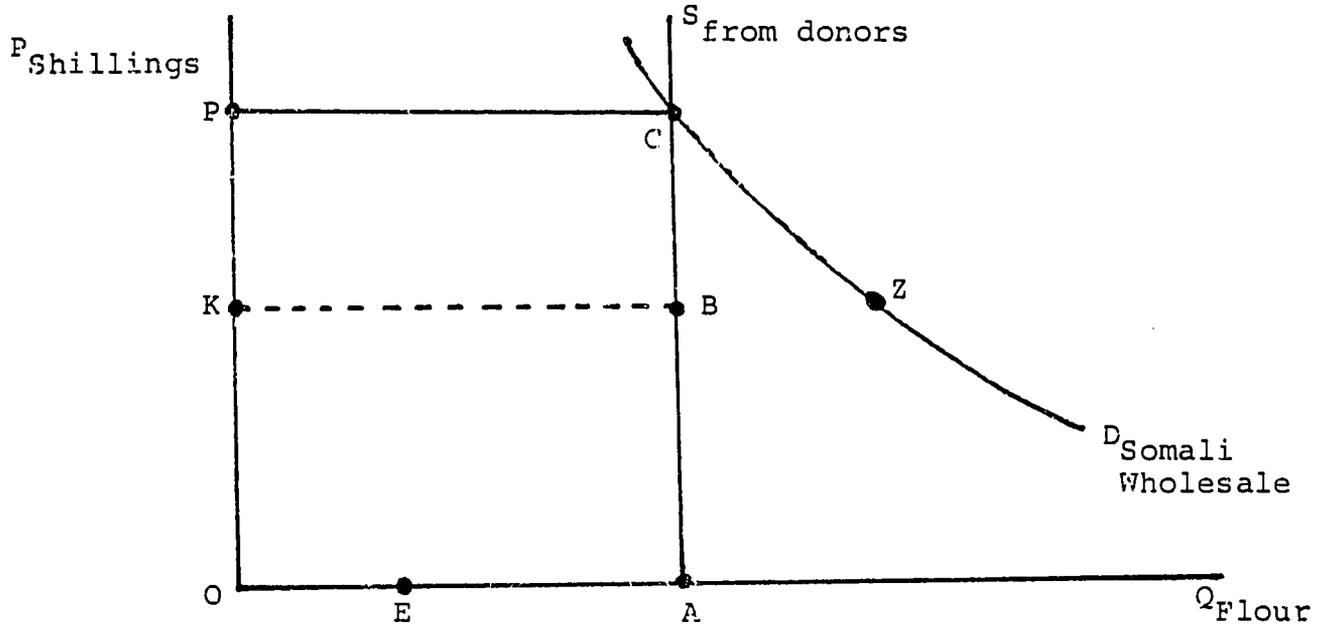
4.15 Given these assumptions, the equilibrium price is  $OP = AC$ . Then, in an attempt to lower prices to consumers, the Government establishes a selling price of  $OK = AB$ . If all of OA is bought by private non-wholesaling individuals and companies, for OABK shillings, they can resell, at the factory gate, the whole amount to wholesalers for OACP shillings. The initial buyers therefore receive unearned income of KBCP shillings. If these buyers are themselves all wholesalers, they capture unearned income of KBCP. This unearned income is created when government attempts to lower price while failing to provide additional quantities large enough to produce that lower price. That is to say, Government attempts to obtain, through price policy, a result attainable only through an appropriate quantity program.

4.16 If some portion of OA, say OE, is sold to army, police and other Government agencies, those groups benefit from an intra-governmental subsidy. Then the amount of unearned income going to private buyers is reduced to KP per unit on only EA units.

4.17 The essential point is that in this market, the equilibrium price must be OP, and any sale at a price below OP will give that buyer an unearned income equal to the difference between the price paid and OP. This price of OP is not set in any way by wholesalers; instead, it is entirely a consequence of consumers' reactions to the supply AC. This equilibrium price can be reduced only a) by cutting demand by i) reducing the number of consumers, or ii) changing

Figure IV-2

The Unearned Windfall Profits That Result from Failed Attempts to Subsidize Consumers of a Foreign-Aid Grain Product



their taste away from flour products, or iii) restricting demand to assigned rations, or iv) reducing the prices of substitutes, or b) by increasing the supply of flour. But so long as supply and demand intersect at the price, OP, Government selling prices below OP will not affect prices paid by consumers.

4.18 The Government could pass the benefits of low prices through to consumers. But it could do so only if it could provide enough police to keep the individuals allowed to buy at low prices from selling to the people willing to pay the higher prices. Lacking such a ubiquitous police force, Government sales at any price, OK, below OP costs the Government revenue of KBCP and delivers that revenue to the people permitted to buy from Government.

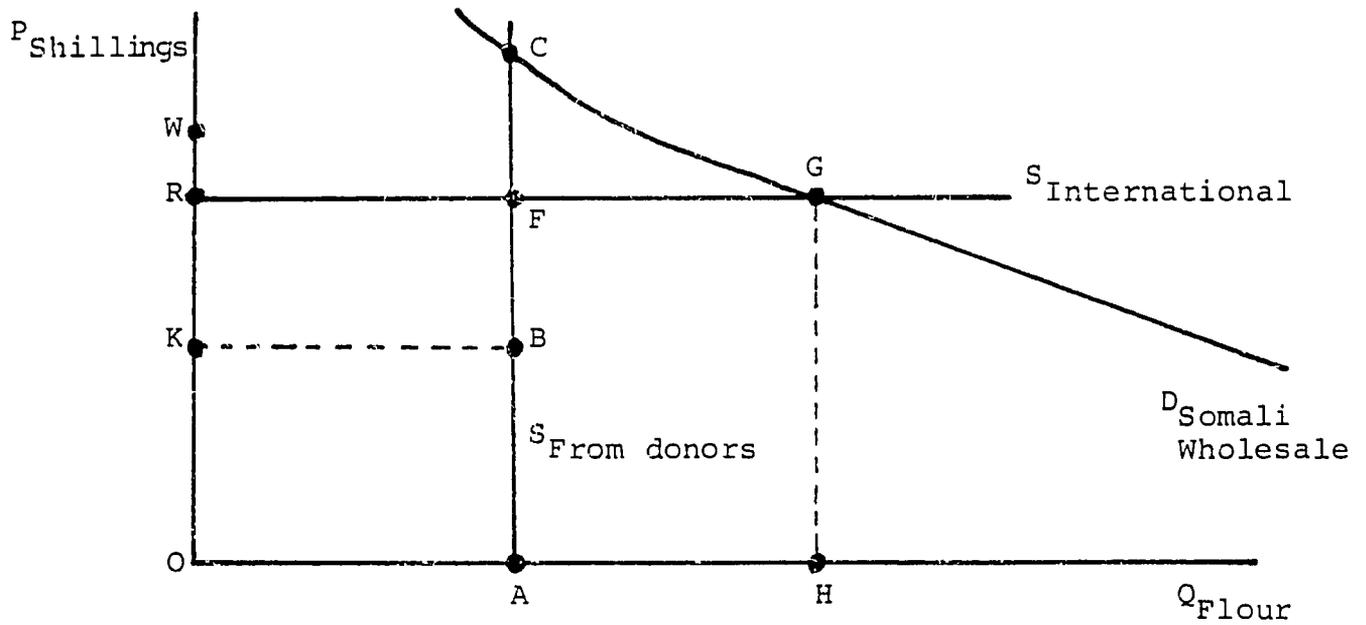
Concessional imports and commercial imports.

4.19 Figure IV-3 illustrates a case that is more complicated but that seems to have existed in Somalia in recent years. Again wholesale demand is shown, and the concessional quantity is OA for a three month period. But this time, flour is also available at an imported price of OR (covering c.i.f. costs plus delivery in Mogadishu). Assuming Somali purchases to be too small to affect world prices, the international supply to Somalia is the flat line through points RFG in Figure IV-3. Given these assumptions, the Somali price is determined by the international price, so equilibrium price is OR, and the quantity AH is imported. The wholesale market value of the flour from foreign aid is, therefore, OAFR.

4.20 If, however, the Government uses some pricing formula that gives a price below OR, say OK, then the Government's revenue will be only OABK (a loss to Government of KBFR), market prices will be unchanged, and the people permitted to buy from Government at OK will obtain unearned income of KBFR. Alternatively, if Government's pricing formula results in a price of OW, commercial imports will rise to OH, and Government will sell no flour. (Since imports take time to arrange and deliver, Government could sell some flour at OW during the interval between imposition of that price and the arrival of increased imports.)

Figure IV-3

The Unearned Windfall Profits That Result from Failed Attempts to Subsidize Consumers of a Foreign-Aid Grain Product When Some of That Product Is Imported Commercially



4.21 The essential point is that as long as concessional imports are less than OH, the quantity the recipient nation would buy in the absence of this aid, the market price will be import parity. Government, then, cannot influence price through "price policy" (though it might through police force). Barring police control, price can be cut only through a "quantity program" that brings concessional imports greater than OH.

The case with exchange controls.

4.22 In the two cases just shown, the implicit premise was that the exchange rate fluctuated freely. Because Somalia now controls the exchange rate so that the official rate coexists with a fluctuating parallel market rate, the next section describes such a situation.

4.23 Figure IV-4 illustrates this situation. Once again, the demand curve represents the demand of wholesalers at the port. Once again the donated quantity is OA for a three month period. But in this case, commercial imports are available at two different shilling prices. If individuals can obtain letters of credit at the official exchange rate, they pay only OL = AM per quintal. If they must buy foreign exchange in the parallel market (and can count on getting import licenses), then the flour costs them OR = EJ = HG per quintal.

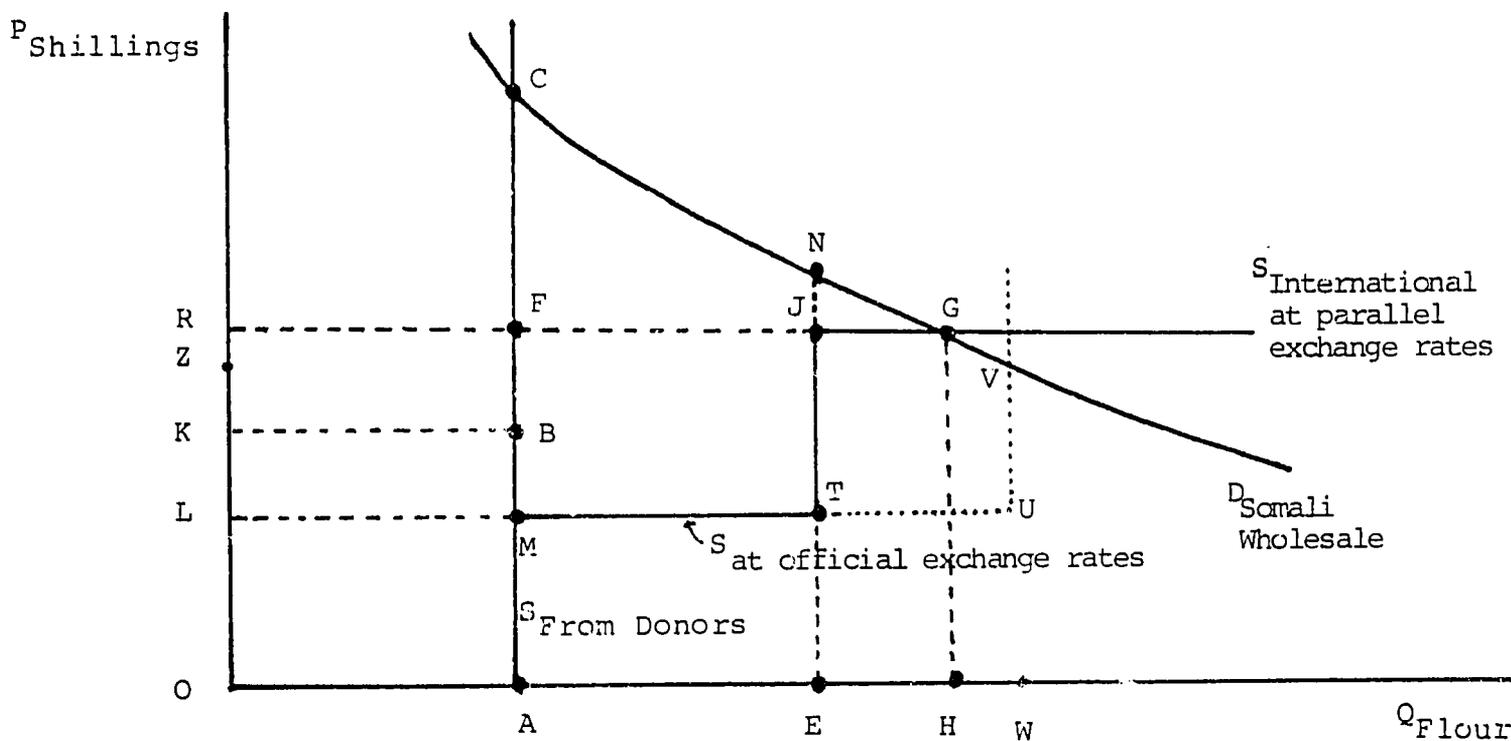
4.24 If anyone wanting to do so could get letters of credit at the official exchange rate, then all commercial imports would be at the cost of OL per quintal, and the market price would be OL. But this does not happen.

4.25 Letters of credit at the official exchange rate cover imports of only AE = MT = FJ quintals. The foreign assistance flour, OA, plus this AE alone would result in an equilibrium price above OR. But once the price rises to OR, commercial imports at the parallel market exchange rate begin. Equilibrium is reached when total imports are OH quintals:

OA from foreign assistance,  
AE at the official exchange rate, and  
EH at the parallel exchange rate.

Figure IV-4

The Unearned Windfall Profits That Result from Failed Attempts to Subsidize Consumers of a Foreign-Aid Grain Product When Some of That Product Is Imported Commercially at Official Exchange Rates and Some at Parallel Market Exchange Rates



A single market price, OR, prevails for flour whatever its source.

4.26 Unearned income then flows to the lucky few who get letters of credit at official exchange rates. Unearned income also flow to the lucky buyers of the foreign assistance flour to the extent that Government sells it for less than OR per quintal.

4.27 The unearned income is seen most easily assuming that the individuals who get the letters of credit and who buy flour from Government do not themselves handle the flour. Instead they come to the port accompanied by wholesalers. The letter-of-credit importers have paid AETM for the imported quantity, AF, they sell to the wholesalers at the port for AEJF and pocket the unearned income of MTJF. The individuals permitted to buy from Government at a price of LK pay a total of OABK but sell to the wholesalers for OAFR and pocket unearned income of KBFR. (The general conclusions would be unchanged if the letter of credit price OL, were assumed to be above the Government selling price, OK.) Because Government programs have no effect on total quantity, consumers receive no benefits from any of the Government's interventions.

4.28 If the Government were further to deny import licenses to people using parallel market foreign exchange, the flour supply would be limited to OE quintals. Then the price would rise to EN, and unearned income would be increased.

Imports lowering prices to consumers.

4.29 The case just described can be identified in practice by the presence of both some imports at the official exchange rate and some imports at the parallel exchange rate. The final case described here is one in which the combination of concessional imports and of imports at the official exchange rate leads to a price below the international price at the parallel exchange rate.

4.30 Figure IV-4 shows this case. If concessional imports are OA and imports at the official exchange rate are AW, the supply

curve WUV intersects demand at an equilibrium price of  $WV = OZ$ . Then there are no commercial imports at the parallel exchange rate; unearned income on the concessional imports is KB times only KZ; and unearned income on commercial imports is MV times UV.

Government auctions to prevent unearned income.

4.31 The last two cases have involved two sources of potential unearned income. If the Government wants to keep such unearned income from reaching individuals, it can do so by auctioning the concessional imports and by auctioning the official-exchange-rate letters of credit. If obliged to submit sealed bids for these two kinds of valuable scarce goods, greedy bidders would need to offer close to OZ per quintal to get the foreign aid flour from other bidders in the last case (or perquintal in the preceding case). They would have to offer close to UV per quintal to get the foreign exchange away from other bidders in the last case (LR per quintal in the preceding case). Government would collect close to KBMUVZ in extra revenue (KBMTJR in the preceding case). Unearned income would be minimized. Alternatively, unearned income would be eliminated (or at least minimized) if Government could simply sell concessional imports at the market price and could sell foreign exchange at whatever "the market would bear."

B. Did Concessional Maize Imports Depress Somali Prices?

4.32 This section raises the question, "did concessional maize imports depress the domestic price of maize (and, given their substitutability, of sorghum)?" The answer reached is that they appear to have done so during most of the years, 1976-82. The supporting evidence is that the concessional imports that supplied 22-36 percent of maize marketed in Somalia during 1976 and 1978-82 were large enough to discourage private commercial imports at either the parallel or the official exchange rates. Further, though the Government imported some maize at the world price at the

official exchange rate, those imports were sold by ADC at a loss. Finally, an end in 1983 to the availability of concessional maize was followed by a sharp increase in the price of maize.

The relevant model.

4.33 Figure IV-1 presents a model of the recent circumstances of the Somali maize market (and excludes immediate consideration of maize consumed by its producers). Somali demand is the line TJF. Supply from domestic production is GLW. Assuming Somalia to be too small to affect world prices, the commercial supply from imports at the official exchange rate is PCE, and commercial supply from imports at the parallel exchange rate is NWT.

4.34 If concessional maize aid is in the amount of  $AC = LM$ , the summation supply of domestic production plus concessional imports is CMU. If, in addition to concessional aid of  $AE$ , commercial imports at the official exchange rate are limited by exchange controls to the quantity  $CH = MJ$ , then the summation supply from the three sources is HJ.

Four possibilities.

4.35 There are four kinds of possible outcome. First, if Government provides as much foreign exchange as maize importers want at the official exchange rate, then so long as concessional imports are less than  $AB$ , price will remain  $OP$ , domestic production will be  $PA$ , and private commercial imports will make up the difference between concessional imports and  $AB$ . Grain aid would save the nation foreign exchange but would have no effect on the price or on quantity consumed.

4.36 Second, Government might provide maize importers with less foreign exchange at the official rate than they want. If this is the case and the sum of concessional maize plus imports at the official exchange rate is more than  $WT$  but less than  $AB$  in Figure IV-1, the domestic price depends on the intersection of domestic demand and aggregate supply. Aggregate supply is the sum of domestic production (say  $GLW$  in Figure IV-1) plus concessional

imports (say, AC = LM in Figure IV-1) plus the imports permitted at the official exchange rate (say, CH = MJ in Figure IV-1). The result is a price of OK, domestic production of KL, and -- again -- no private commercial imports at the parallel exchange rate.

4.37 The third possibility is, quantitatively, a more restricted version of the second. If concessional maize imports plus imports obtained at the official exchange rate are less than WT, the price rises to ON. Then domestic production rises to NW, and commercial imports at the parallel exchange rate make up the difference between WT and the sum of concessional imports and imports at the official exchange rate.

4.38 Finally, at the other extreme, if concessional imports exceed AB, for example, by equalling AE = GF, the summation supply becomes FE. Then price falls to OF and domestic production falls to OG.

4.39 The first and the second of these four cases are distinguished by the presence of commercial imports only at official exchange rates. The second case is distinguished by the presence of commercial imports at both the official exchange rate and at the parallel exchange rate. The fourth case is distinguished by the absence of any commercial imports.

The Somali data.

4.40 Tables 1 and 2 present the statistics needed for an analysis of what concessional maize did to the Somali maize market over the years 1976-83. Table 1 estimates each year's total sales for consumption. It has four components: first, sales from domestic production, assuming marketings to be 40 percent of each crop (the 40% is based on the assumptions of Part A of Annex X); second, government commercial imports; third, concessional imports; and, finally, net changes in ADC inventories. No consideration is given to outflows from the refugees or to net changes in private stocks. There have been no private imports.

4.41 While Table 1 shows the absolute importance of concessional maize imports, Table 2 shows their relative importance. This relative importance is measured more accurately when, as in Table 2, concessional imports are allocated to the year in which they are sold to the public rather than their year of import.

TABLE 1

Estimates of the Components of the  
Somali Commercial Maize Market : 1976-1983

(Thousands of metric tons)

<u>Calendar Year</u>	<u>Marketings if 40% of production*</u>	<u>Government commercial imports</u>	<u>Concessional imports</u>	<u>Change in ADC inventories</u>	<u>Total Sales for consumption</u>
1976	43	37	42	+16	106
1977	44	28	6	+ 8	70
1978	43			-12	55
1979	43		22	- 2	67
1980	44	16	32	- 2	94
1981	63	22	69	+38	116
1982	60			-33	93
1983	94			-12	106

\*This column follows from the assumption that 40 percent of each year's production is marketed.

Source: Appendix Tables A-1 and A-3-a.

4.42 Since maize sales from ADC inventories were always less than earlier concessional imports available for addition to inventories, Table 2 reports as sales from concessional imports both current concessional imports and net change in ADC inventories. Then given, from Table 1, estimated sales of maize for consumption, Table 2 shows the portions of those sales coming from a) domestic production, b) ADC commercial imports at official exchange rates,

and (c) concessional imports. ADC's commercial imports were large in four years. Concessional imports accounted for between 22 and 36 percent of final sales in six of the eight years. If one assumes less than 40 percent of domestic production is marketed, the relative importance of concessional imports is even greater than shown here.

TABLE 2

Absolute and Relative Size of Somali Concessional  
Maize Imports: 1976-1983

	Sales from concessional imports and net change in ADC inventories*	Estimated sales for consumption	Portion of sales from		
			Domestic production	ADC commercial imports	Concessional imports
1976	26,000 tons	106,000 tons	41%	35%	24%
1977	-2,000	70,000	63	40	n.a.
1978	12,000	55,000	78		22
1979	24,000	67,000	64		36
1980	34,000	94,000	47	17	36
1981	31,000	116,000	54	19	27
1982	33,000	93,000	65		35
1983	12,000	106,000	89		11

\*Concessional imports were large enough during relevant preceding years to account fully for all sales from inventories.

Source: Annex IV, Table 1.

Interpretation.

4.43 The Study Team is convinced that no private parties ever imported any maize (or any sorghum) using foreign exchange from the parallel market. Thus, the third possibility respecting the Figure IV-1 model is ruled out. The price was never high enough for anyone in Somalia to make a profit on such imports.

4.44 Further, so far as the Study Team could determine, no private persons ever imported any maize (or sorghum) using foreign exchange obtained at the official exchange rate. Assuming that the Government's commercial maize imports were not undertaken for profit,<sup>1/</sup> these observations seem to rule out both the second and third possibilities seen in the Figure IV-1 model. Concessional imports of maize appear to have been so large during the years 1976-1982, that no private parties imported maize at either the parallel or the official exchange rate. Selling its commercial imports below cost, ADC seems to have passed along enough concessional maize to hold the market price of maize in the vicinity of OR in Figure IV-1.

4.45 Yet the absence of private commercial imports could be due to other causes. Foreign exchange regulations have been both strict and variable. Import licensing procedures have also been both strict and variable. Both ENC and ADC have had the right to confiscate commercial imports, a right exercised from time to time under conditions not precisely defined. Therefore, non-price considerations have been of great significance to potential importers. This survey does not permit a definitive explanation of the absence of private commercial maize imports. But given the

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<sup>1/</sup> On the contrary, ADC used letters of credit to pay for its commercial maize imports. ADC officials did so knowing the import price was above ADC's selling price (though not necessarily above the market price). They asked the Ministry of Finance to either help ADC to obtain authorization to sell the commercial imports at full cost or to appropriate a subsidy covering the difference between cost and selling price. The Ministry of Finance did neither. ADC sold at its then official selling price, and its losses on those sales are perpetuated in outstanding letters of credit on which ADC continues to pay interest.

evidence in hand, the Team believes concessional imports of maize have held down domestic maize prices through the spring of 1983. 4.46 Now, in the late months of 1983, the stock of concessional maize, accumulated by ADC in 1981, is gone. Concessional maize no longer supplies the Somali market, and as the rains fail sorghum farmers, maize prices rise.

C. Has Other Concessional Aid Reduced Demand for Maize?

4.47 The preceding section concentrated on the effect of concessional maize imports on the supply of maize. This section raises the question, "did concessional imports of wheat, flour, and rice reduce the demand for maize (and for sorghum)?" The answer reached is that these other concessional grain imports do appear to have reduced the demand for maize (and sorghum) and, so, have contributed to reducing the domestic price of maize (and of sorghum). The question is raised because, over the period 1979-1983, as Table 3 shows, concessional grain imports of all kinds made up 32-50 percent of all grain marketed in Somalia.

TABLE 3

Absolute and Relative Size of Imports of Grain  
and Grain Products: 1979-83

(Thousands of metric tons and percentages of "Total.")

Calendar Year	Marketed Domestic Production	Imports		Total	Percent		
		Commercial	Concessional		Domestic	Commercial Imports	Concessional Imports
1979	105	48	102	255	41	19	40
1980	107	67	174	348	31	19	50
1981	153	77	193	423	36	18	46
1982	162	54	101	317	51	17	32
1983	<u>152</u>	<u>60</u>	<u>108</u>	<u>320</u>	<u>47</u>	<u>19</u>	<u>34</u>
	679	306	678	1,663	41	18	41

Source: Text Table 2 and the assumption that 40 percent of domestic production was marketed.

For the whole period, 1979-83, Table 3 estimates concessional imports provided 41 percent of all grain and grain products sold in Somali markets. Three fourths of these concessional imports were wheat, flour, and rice. The evidence that their volume depressed maize prices is the apparent absence, much of the time, of private interest in commercial imports of these products at the parallel exchange rate. The available evidence is imperfect, but suggests that at least part of the time, since ENC allowed private imports, prices have been too low to attract private importers. If concessional imports have reduced rice, wheat, and flour prices (and excluding the possibility of zero cross elasticity), then the demand for maize (and for sorghum) has been reduced.

4.48 As explained in the preceding section, given a relevant perfectly elastic international supply of maize, a decrease in demand need not affect price. But, the lower the demand for Somali maize, the smaller the amount of concessional maize that will lower its price. Therefore, concessional imports of wheat, flour, and rice do appear to have contributed to reductions in the price of Somali maize.

D. Have Concessional Imports Led to Unearned Incomes?

4.49 The question whether concessional grain imports led to unearned income can be answered with a straightforward "yes." Government price policies have delivered unearned income to those able to buy concessional grain at below market prices, and Government sales of foreign exchange at official rates have delivered unearned income to those using that foreign exchange to import grain to be sold at higher market prices. Both kinds of unearned income followed from Government efforts to reduce prices where quantities were too small to permit those price reductions.

The model.

4.50 Figure IV-4 presents the relevant model for wheat, flour, and (excepting small domestic production) rice. It shows no

domestic production, a fixed quantity, OA, of concessional flow imports, a perfectly elastic foreign supply, LMU, at the official exchange rate, and another perfectly elastic foreign supply, RFG, at the parallel exchange rate. If an unlimited amount of foreign exchange were available at the official rate, the equilibrium price would be OL. But Figure IV-4 presents two more realistic cases, both involving limits on the availability of foreign exchange at the official rate. If the available amount finances only AE of flour imports, the price rises to CR, import parity at the parallel exchange rate, and the quantity JG = EH is imported at the parallel rate. But if the amount available at the official rate finances imports in excess of FG, e.g., of MU, then the price falls to OZ, and no flour is imported at the official rate.

What happened in Somalia.

4.51 The Statistical Appendix Graphs 1 through 7 all show how often in recent years official pasta, flour, rice (and maize and sorghum) prices have been below market prices. In the Figure IV-4 model, this involves sales at a price OK to buyers able to resell immediately at a price OR (or OZ if imports at the official exchange rate are large enough). Section C of Annex X estimates at 14 million shillings the value in January - June 1983 of the unearned income provided on sales of spaghetti at below-market prices and at 95 million shillings the unearned income from rice sales in 1982.

4.52 In the Figure IV-4 model, the second source of unearned income appears on the imports of AE (or of AW) at the official exchange rate. When private importers have been sold letters of credit at the official exchange rate for imports of rice and flour they have paid only AM shillings per unit but have sold at OR (or at OZ) per unit.

4.53 Behind both of these low price policies (for grain and for foreign exchange) has been, at least in part, a Government effort to lower food prices. But the low prices of government sales of grain and of foreign exchange had no effect on market price.

Market price was cut only when concessional imports and imports at the official rate became large enough, e.g., OW in Figure IV-4, to intersect demand to the right of G. The Government's quantity programs do appear to have achieved that result at least part of the time. But they did so quite independently of the Government's low-price policies.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

The Agricultural Land Registration System

by Dr. A. Godah Barre

Planning Department, Ministry of Agriculture

5.01 According to Law No. 75 of 1975 titled "Agrarian Land Reform," all agricultural land is the property of the State. This same law offers every citizen the opportunity to lease land for use for agricultural purposes for a period of 50 years. The Ministry of Agriculture authorized the issuance of the land leasing certificates through its Land Service Office.

5.02 The law places a maximum of 100 ha on the size of irrigated farms growing perennial plants. If planted in seasonal crops, the maximum farm size is 30 ha for irrigated land and 60 ha for rainfed land. If the lessee is a company, a cooperative or a state farm, the law permits farm sizes even greater than 100 ha. If the recipient of a land leasing certificate does not utilize the leased land within two years, the law allows the Government to cancel the lease. This provision is not being applied in all cases because of the large amount of unleased agricultural land still available in many Regions.

5.03 During the nearly nine years since 1975, when agricultural land leasing was begun in Somalia, the Ministry of Agriculture has leased:

- Irrigated land	99.156 ha
-- Rainfed land	<u>39.896 ha</u>
Total	<u>139.052 ha</u>

During the first nine months of 1983, the Ministry of Agriculture issued leasing certificates for 40.540 ha. This nine-month

addition equals 41 percent of the total land leased during the preceding eight years (1975-1983). In January 1983, in the Lower Shabelle Region leasing certificates outstanding included 59,316 ha, or 43% of all the land leased. The portion of rainfed land leased is much lower than the portion of irrigated land leased. The cumulative total hectares leased, through 30 September 1983, are shown in Annex V, Table 1.

5.04 Clearly, where there are production incentives, such as roads, main canals, and water barages, the demand for land titles is always higher, e.g., in the Lower Shabelle Region, many roads have already been constructed such as Mogadishu/Afgoye/Shalambot/Janale/Qoryoley, Shalambot Golwey/Bulo-Marerto/Kunturwarey, Bulo-Marerto/Mudun/Sablale/Mudun/Barawe, Afgoye/Wanle-Weyn. Moreover, the Afgoye/Awdhegle/Mubarak/Janale road is under construction, and work is expected to begin very soon on the Afgoye/Jambalul/Balad road. This Region enjoys main canals with a total length of about 380 km and with all having sources from the Janale and Qoryoley barages. The high demand for land and for land leases in this Region created, in some places, the cancellation of land leased to those who had not planted their land within law's required period of two years.

5.05 Most farmers, especially the small farmers, do not lease their land as it requires time and some money to obtain least certificates and they feel they can safely ignore the law because they have been farming "their" land for a long period of time. One obstacle they are avoiding is the provision that the Ministry of Agriculture never issues a leasing certificate unless the Authority concerned (the district representative of the Ministry of Agriculture, or the District Police Department and the District Commissioner) proves that the land in question belongs to nobody else. This proof imposes time and money costs on the prospective lessor. Even when certificates are issued,

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Land Leases by Regions; Cumulative Totals: 1975/1983\*  
(Hectares)

<u>Regions</u>	<u>Irrigated Land</u>	<u>Rainfed Land</u>	<u>Total Land</u>
North-West	4,771	18,153	22,924
Togdher	508	14,007	14,515
Sanag	116	1,183	1,299
Hirar	3,792	36	3,828
Middle Shabelle	19,277	1,002	20,279
Lower Shabelle	58,278	1,038	59,316
Gedo	3,808	-	3,808
Lower Jubba	1,730	329	2,059
Middle Jubba	6,378	4,148	11,026
Bay	n.a.	n.a.	n.a.
Bakol	n.a.	n.a.	n.a.
Total	<u>99,157</u>	<u>39,896</u>	<u>139,053</u>

Source: The Land Service Office of the Ministry of Agriculture.

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\*Through 30 September 1983.

surveying is only approximate. As a result, there are many disputes over borders.

5.06 Somali tax law provides that all farmers must pay yearly land taxes to the Central Government and to the Local Government at the following rates:

On Irrigated Land (To the Central Government):

Small Farmers	So.Shs.	10 per ha
Individuals or Companies		
Perennial Crops	" "	50 per ha

Rainfed Land (To the Local Government):

Small Farmers	So.Shs.	5 per ha
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5.07 The law may be more easily enforced on farmers with leases than on those without. But so far, even on leased land, the Central Government land tax has not been very successful because farmers seem to believe that a tax of 50 shs/ha/year is very high. Most farmers avoid paying it. The state farms, about 94,100 ha, are not registered in the Ministry of Agriculture's Land Service Office. Generally their land is allocated to them by a special letter from the Ministry of Agriculture or from a Higher Authority. Both the courts and international agreements are satisfied when State Farms are registered in this way. The credit institutions do not make loans to farmers who want to mortgage their land unless there is good infrastructure on the land, i.e., canals, roads, houses, land leveling, bunds, etc.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Grain Production in Somalia

by Dr. A. Godah Barre

Planning Department, Ministry of Agriculture

6.01 Cereal production in Somalia is determined by climate specially by rains which average 400-700 mm per year but which are irregular. The rains fall during Gu' and Deyr seasons. During some Deyr seasons in some Regions, farmers harvest nothing. In the Gu' season, April-August, the farmers plant mainly maize (on irrigated land) and sorghum (on rainfed land). In the Deyr season, October-January, the farmers plant mainly sesame (on irrigated land) and sorghum (on rainfed land). Often, the farmers intercrop sesame with maize and cowpeas with maize and sorghum. In the Bay Region only, the farmers plant peanuts in both the Gu' and the Deyr seasons.

6.02 The total cultivable land of Somalia is about 8 million ha, while present cultivated or semi-cultivated land is estimated to be about 800,000 ha, which is equal to 10 percent of the total cultivable land. Not all of those 800,000 ha are planted in any one season. During the two seasons of the year (Gu' and Deyr), an estimated 600,000 ha come under maize and sorghum cultivation: 400,000 ha in the Gu' and 200,000 ha in the Deyr.

6.03 The maize and sorghum production of Somalia, during the last 13 years, has been fairly consistent except during 1973 and 1974 when drought (DABADHER) affected the entire country. The shortfalls of those two years are shown in Annex VI, Table 1. Rice production increased during this period from 2.94 MT in 1970 to 20 MT in 1982. The Fanole and Ngambo rice projects will be finishing in 1986-1990 and will have a land capacity of 10,000 ha, which will help meet the cereal needs of the country.

6.04 Nearly all grain is produced by small farmers who seek first to provide for their own daily consumption. These farmers, either consume or store some 75 percent of their production, and the remaining 25 percent is sold either to the Agricultural Development Corporation (the ADC) to private grain merchants or to other families as the farmers seek cash to cover their other consumption wants. Farmers are always worried about bad seasons; and as a result of those concerns, all farmers attempt to maintain stores--mostly underground--large enough to meet their basic needs for one or two or more years.

6.05 Small farmers rarely plant more than 15 ha on irrigated land or more than 5 ha on rainfed land.

6.06 A variety of weaknesses have persisted in agricultural incentives in Somalia: e.g., bad roads which result in isolation of producing villages during the rainy seasons, the ADC price of grain has been lower than the costs of production, shortages of pesticides, shortages of machinery, improper functioning of old canals, bad relations between the farmers and credit institutions, the irregular flows of the Juba and Shabelle rivers which sometimes miss the proper times for planting, Extension Project which not yet in full implementation so giving only advice and ideas on traditional farming. If domestic cereal production is to cover more of the cereal requirements of the country, these problems must be alleviated.

6.07 In Gu' 1983, the country could be subdivided into three parts according to the rains received:

1. North-West, Togdher and Sanag Regions, that received enough rains for their production.
2. Lower Shabelle (Km 50 village), Middle Jubba (West Buale) and Lower Jubba Regions, that received good rain; while both rivers were having enough water.

Moreover, some of the main canals (Lower Shabelle) were fully maintained, therefore their irrigation was better.

3. The rest of the Regions (Gedo, Bakol, Bay, Hiran, etc.) where production was low due to the poor rains.

Since there were poor rains in the sorghum producing regions, sorghum production was low, while maize production reached record levels. In Annex VI, Table 2, 1982 and 1983 production are compared. Rice production was very low in 1983 due to the shortage of fertilizers, especially of Nitrogen (UREA).

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Grain Production in Somalia

Production of Cereals in Somalia - 1970-1982  
(Thousands of Metric Tons)

<u>Year</u>	<u>Maize</u>	<u>Sorghum</u>	<u>Rice</u>
1970	122	158	3.0
1971	99	129	2.4
1972	115	149	3.5
1973	99	128	3.5
1974	97	126	4.0
1975	104	135	5.0
1976	108	140	5.4
1977	111	145	8.4
1978	108	141	12.0
1979	108	140	13.6
1980	111	140	16.7
1981	142	222	19.0
1982	150	235	20.0

Source: The Ministry of Agriculture.

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INCENTIVES AND GRAIN MARKETING STUDY

Grain Production in Somalia

Cereal production in Somalia - 1983\*  
(Thousands of Metric Tons)

<u>Crops</u>	<u>1982</u>	<u>Gu' 1983</u>	<u>Deyr**1983</u>	<u>Total 1983</u>
Maize	150	181	54	235
Sorghum	235	109	33	142
Rice	20	1.5	1.5	3

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\* Deyr season estimated

\*\* Estimates based on: Maize 30%, sorghum 30% and Rice 100% of Gu' production.

Source: The Ministry of Agriculture.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

by Dr. A. Godah Barre

Planning Department, Ministry of Agriculture

7.01 The history of state farms in Somalia began during 1970. Generally, it is proved that the production progress in the state farms production has been weak except on the two sugar cane plantations of Jowhar and Marerey and during the early years on the Crash Programme Farms.

7.02 The total area of the state farms in Somalia is 94,100 ha. Annex VII, Table 1 shows a detailed list of the State Farms by areas. Most of that area (79,900 ha) is irrigated land, while 14,200 ha is rainfed land of which most belongs to the Settlements and the Crash Programme.

7.03 Eventhough both funds and modern machines were available, these farms lacked both proper management and skilled manpower. Moreover, the increased costs of inputs in world markets for fertilizers, pesticides, spare parts, fuel etc. have adversely affected the State Farms in Somalia.

7.04 The production of Crash Programme Farms has always been very low (except during the early years) as their production has never been much above the normal cereal consumption of the pioneers; so they have had very little to market. The main objective of the Crash Programme Agency was to create skilled labour on a nation level. The Crash Programme Agency trained 19,367 people in different skills: as tractor drivers, auto-vehicle drivers, electricians, welders, moto operators, mechanics, clerks, blacksmiths, telephone operators, junior nurses, farm

irrigators, rice technicians, plant protectors, carpenters, poultry caretakers, tobacco curers, masons, painters, turners, plumbers, and junior agricultural technicians. Annex VII, Table 2, shows the number trained in each of these skills.

7.05 The Settlement Development Agency farms cover 21,000 ha and were planned to accommodate 20,600 families. Annex VII, Table 3 shows the number of families scheduled to live on each Agency farm and the number of hectares owned by and planned for use by each Agency farm. In fact, the Settlement Agency farms cultivate only 4,868 ha, and only 5,738 families live on them. The details are shown in Annex VII, Table 4. Though these families produce small amounts, they survive on donated food. Their total outputs are shown in detail in Annex VII, Tables 5, 6, and 7.

7.06 The Fanole and Ngambu projects are now in the first phase of construction and production and will help meet Somalia's cereal requirements their last phases are finished. In the Libsoma project, the Government decided to rebuild the entire project given the attractive tender of an Egyptian consulting company (FINTECS). The work of rebuilding began in 1982. The Grape Fruit Project has established in 1971 and upto now 130 ha have been cultivated.

7.07 Clearly cereal production on Somali state farms is very low. The small amounts of grain they have to sell are all sold to ADC. But since ADC buying prices are below production costs, all such sales involve losses to the state farms.

SOMALIAINCENTIVES AND GRAIN MARKETING STUDYState Farms in Somalia

State Farms by Hectrage and by crops\*

<u>Agency</u>	<u>Area (Ha)</u>	<u>Main Crops</u>
Jowhar Surgar Plantation	5,000	Sugar cane
Juba Sugar Project	8,000	Sugar cane
Balad Irrigation Project	1,000	Cotton, maize
LIBSOMA (Afgoi Irrigation Project)	7,000	Maize, rice, oilseeds, banana
Production and Development of Fruits Project	4,000	Banana
Fanole Irrigation Project	8,000	Rice, maize
Ngambo Irrigation Project	12,000	Rice, cotton, oilseeds, banana
Grape Fruit Project	1,300	Grape fruit
Oilseed Project	600	Oilseed (sorghum)
Barawayne Rice Project	1,000	Rice
Settlements Development Agency	21,000	Maize, sorghum, oilseeds
Seed multiplication Centre	200	Maize, oilseeds
Crash Programme	19,000	Maize, sorghum, oilseeds, banana, grape fruit
Custodial Police	1,800	Maize, oilseeds, vegetables, banana, grape fruit
Police	600	Maize, oilseeds, vegetables, banana, grape fruit
Military	2,600	Maize, oilseeds, vegetables, banana, grape fruit
<b>Total:</b>	<b>94,100</b>	

Source: The Ministry of Agriculture

\* Dairy farms excluded.

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Numbers of People Trained by the Crash Programme Agency - 1971/83

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<u>Profession</u>	<u>Number of trained person</u>
Tractor drivers	2,106
Auto-vehicle drivers	1,513
Welders	52
Motor operators	92
Electricians	20
Mechanics	52
Clerks	102
Blacksmiths	130
Telephone operators	6
Junior nurses	398
Fram Irrigators	950
Rice technicians	150
Plant protectors	310
Carpenters	22
Poultry caretakers	89
Tobacco curers	69
Masons	36
Painters	20
Turners	6
Plumbers	6
Junior Agricultural Technicians	13,198
Total:	<u>19,367</u>

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Source: The Crash Program Agency.

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Areas Owned and Intended for Farm Use by the Settlement  
Development Agency

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<u>Settlement District</u>	<u>Irrigation Ha.</u>	<u>Rainfed Ha.</u>	<u>Total Ha.</u>	<u>Number of Families</u>
Kunturwar	3,000	3,000	6,000	5,200
Sablale	3,000	3,000	6,000	5,800
Dujuma*	9,000	6,000	15,000	9,600
Total:	15,000	12,000	21,000	20,600

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Source: The Settlement Development Agency

\* Transferred to Fanole and Marere area due to soil salinity.

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Actual Areas Cultivated by Settlement Development Agency Farms

<u>Settlement District</u>	<u>Irrigated Ha</u>	<u>Rainfed Ha</u>	<u>Total Ha</u>	<u>Number of Families</u>
Kunturware	1,518	700	2,218	2,785
Sablale	1,200	700	1,900	2,203
Dujuma	750	-	750	750
Total:	3,468	1,400	4,868	5,738

Source: The Settlement Development Agency.

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Production at Kurtunware, 1976-1983

(In Metric Tons)

<u>Crops</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Rice	-	28.4	146.1	519.5	501.9	287.7	299.9	-
Maize	255.6	683.7	476.8	479.6	106.7	503.7	623.2	1965.4
Cowpeas	-	-	4.7	399.5	18.4	44.4	1.3	-
Groundnuts	-	-	-	-	19.0	-	-	-
Sesame	25.5	121.4	29.5	103.5	-	197.8	-	-
Tomatos	-	108.6	106.7	-	19.0	-	51.5	-
Onions	-	1.3	7.5	-	2.1	-	12.5	-
Watermelons	-	26.9	25.6	-	5.0	-	6.0	-
Carrots	-	-	40.0	-	33.0	-	-	-
Cucumbers	-	0.2	-	-	-	-	-	-
Pumkins	-	16.8	7.8	-	0.1	-	15.0	-
Sweet Peppers	-	0.8	9.1	-	2.3	-	3.0	-
Papaya	-	120.0	172.4	-	-	-	150.0	-
Bananas	-	50.8	636.8	-	31.9	-	200.0	-
Potatoes	-	-	2.1	-	-	-	-	-
All Fruit	-	-	-	203.0	-	-	-	-
All Vegetables	-	-	-	833.4	-	-	-	-

Source: The Settlement Development Agency

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Production at Sablale, 1975-1983

(In Metric Tons)

<u>Crops</u>	1975	1976	1977	1978	1979	1980	1981	1982	1983
Maize	3.0	37.0	76.0	31.0	25.4	143.2	278.2	158.8	1,250.5
Sesame	71.2	45.6	21.6	-	28.5	-	3.2	101.0	-
Rice	-	-	256.5	-	595.0	56.7	349.4	383.2	-
Cowpeas	-	-	4.7	17.7	-	2.2	163.0	210.0	-
Onions	-	0.8	3.8	26.0	120.0	17.5	-	-	-
Tomatos	-	174.9	0.9	41.7	340.0	7.5	-	17.5	-
Watermelons	-	0.6	0.8	35.0	345.0	11.9	-	8.0	-
Pumkins	-	1.0	-	-	80.0	-	-	3.0	-
Papayas	-	-	43.3	33.4	80.0	-	-	150.0	-
Cucumbers	-	-	0.5	-	120.0	-	-	0.7	-
Carrots	-	-	0.2	-	-	20.0	-	-	-
Sweet Peppers	-	-	0.4	11.7	-	-	-	2.0	-
Sorghum	-	-	-	49.3	-	-	-	-	-
Beans	-	-	-	-	244.0	-	-	-	-
Okra	-	-	-	-	-	1.3	-	-	-

Source: The Settlement Development Agency

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INCENTIVES AND GRAIN MARKETING STUDY

State Farms in Somalia

Production at DUJUMA, 1975 - 1979

(In Metric Tons)

<u>Crops</u>	1975	1976	1977	1978	1979
Maize	13.1	322.0	2.5	91.0	0.2
Sesame	9.8	57.3	16.4	-	76.3
Rice	-	-	0.2	-	-
Cowpeas	-	-	-	-	30.8
Tomatos	-	-	10.0	35.0	43.6
Sweet Peppers	-	-	-	-	1.0
Onions	-	-	5.0	6.2	4.0
Watermelons	-	-	150.2	-	102.7
Cucumbers	-	-	20.0	-	-
Carrots	-	-	25.0	6.2	-
Sweet Potatos	-	-	25.0	1.5	-
Papaya	-	-	10.0	33.1	-
Sorghum	-	-	-	50.0	16.5
Groundnuts	-	-	-	29.5	-

Source: Settlement Development Agency

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Crop Production Costs

8.01 Sorghum (mostly rainfed) and maize (mostly irrigated or on flood areas) occupy about 80% of Somalia's sown area. Consequently most work to find crop production costs of annual crops has been concentrated on the two crops. A range of such costs for maize is shown in Annex VIII, Table 1 and for sorghum Annex VIII, Table 2. In both cases data has been taken from the "Farm Management Data Book" (FMDB)<sup>1/</sup> and from information produced by the ongoing survey of the MOA Research Service. The help given by the MOA staff and FAO technical staff is gratefully acknowledged. The Incentives and Marketing Study Team (Study Team) understands that FMDB data was collected by MOA/MOLFR teams that visited farms and interviewed both individual farmers and farmer groups. The MOA Research Services study is actually measuring time taken to perform farm operations and visits "observation farms" regularly during the year. Some of the comments that follow also derive from impressions gained by the Study Team during visits to markets and farms in Middle Shebelle, Lower Shebelle and Bay Regions, during November 1983.

8.02 Annex VIII, Table 1 shows reasonably uniform costings for maize. The Study Team feels that the data provide a useful idea of the cost range. Since FMDB data was collected in 1981 and 1982 an attempt has been made to update some of the components to reflect 1983 costs, particularly weeding costs. Farmers in different localities of maize growing areas gave remarkable uniform information about weeding costs which showed

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<sup>1/</sup> Prepared by FAO Project NECP/SOM/503 and the Planning Department of the Ministry of Agriculture (MOA) and the Ministry of Livestock, Forestry and Range (MOLFR).

them to be Shs: 1,000/ha to Shs:1,500/ha. In the intensively cultivated area of Afgoi, Gu 1983 and present weeding costs are even higher. Weeding represents a major cost element (usually two-thirds of labour costs) and one for which labour is often hired. Data from Appendix VIII, Table 1 indicates that maize production cost is at present in the So. Shs: 400/q range. How much of that cost represents farmer's cash outlay could not be accurately established. One could assume that for larger commercial farmers the greater part of the cost would represent cash outlay. With regard to smaller farmers, the Study Team found some indication that cash outlay was Shs: 1,000 - 1,500 per hectare in maize, for land preparation and much of the weeding cost. This information comes close to the findings of the Research Services investigation of about Shs: 1,600 cash outlay per cultivated hectare. This would mean Shs: 260/q maize production.

8.03 Sorghum cost data in Appendix VIII, Table 2 shows considerable variability. The low production costs of around Shs: 400/ha during the 1982 Gu season in Baidoa contrast sharply with the very high Der 1981/82 costs found in Afgoi area. Admittedly one would expect wages to be higher in the latter area, but the low level of Baidoa costs derived both from very low wage rates, which no longer exist, and low labor input into such operations as weeding. Study Team inquiries from about 10 different sources in Burhakaba, Baidoa and Densoor districts elicited information that most closely resembles MOA Research Services investigation results, (Appendix VIII, Table 2) which indicate a production cost of round Shs: 300/qu. Study Team inquiries also support Research Services estimates that cash outlay at least on larger units, is around Shs: 1,000/ha. One marked difference between sorghum production in the Bay Region and maize production and possibly sorghum production outside Bay Region is that plowing is usual for preparing maize

land, while sorghum is sown into unplowed land. Plowing is only done when new land is prepared for sorghum or when weeds have got totally out of hand.

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COSTS

Crop Production Costs

Incentives and Marketing Study

Sorghum Production costs (Shs/ha)

<u>F M D B</u>		<u>F M D B</u>	
<u>Average 6 Farms Baidoa Gu. 1982</u>		<u>Average 5 Farms Masubiye Gu. 1982</u>	
1. <u>Fixed Cost</u>		1. <u>Fixed Cost</u>	
Land rent	30	Land rent	20
Taxes	<u>10</u>	Taxes	<u>10</u>
	40		30
2. <u>Machinery</u>		2. <u>Machinery</u>	
3. <u>Material Cost</u>		3. <u>Material Cost</u>	
Seed	11	Seed 2-5Kg - 10	10
4. <u>Labour + Transport</u>		4. <u>Labour + Transport</u>	
Seeding	16	Seeding 3 m/days	30
1st Weeding	64	1st Weeding 4 ""	20
2nd "	54	2nd "        3 ""	15
3rd "	5	Harvest     2 ""	24
Cut-Heads	40	Transport to Vill.	20
Threshing	60	Threshing	144
Transport of Heads	18	Guarding	30
"     to Market	50	Transport to Market	120
Guarding	<u>36</u>		
	343		<u>403</u>
Costs 2 - 4 = 354		Costs 2 - 4 = 413	
"     1 - 4 = 394		"     1 - 4 = 443	
Yield 3 q/ha		Yield 6 q/ha	
Cost/q = 131		Cost/q = 74	

ANNEX VIII

Table 1 (Cont)

<u>F M D B</u>		<u>F M D B</u>	
<u>1.5 ha Farm Near Afgoi Der 1981</u>		<u>2 ha Farm Laba Donka Village Der 1981</u>	
1. <u>Fixed Cost</u>		1. <u>Fixed Cost</u>	
Land rent	80	Land rent	80
Taxes	<u>10</u>	Taxes	<u>10</u>
	90		90
2. <u>Machinery</u>		2. <u>Machinery</u>	
Plowing 6hrs/ha	720	-	-
3. <u>Material</u>		3. <u>Material</u>	
Seed 33 kg	50	Seed 20 kg	28
4. <u>Labour + Transport</u>		4. <u>Labour + Transport</u>	
1st W/ing 120/Darab	480	Land prep 8 m/days at 20	160
2nd " 80/ "	320	Levelling 8 " " " 25	200
3rd " 60/ "	240	Sowing 4 " " " 50	200
Sowing 30/ "	120	1st W/ing 16 " " " 30	480
Cutting 30/ "	120	2nd W/ing 16 " " " 20	320
Harvesting 20/ "	80	3rd " " 16 " " " 15	240
Thresh + Bag	270	Cutting 4 " " " 30	120
Transport to Vill.	140	Harvesting 4 " " " 20	80
Transport to Market	300	Transport to Vill.	150
Guarding	250	" " Market	120
	<hr/>	Guarding + spv.	<u>300</u>
	2,320		2,370
Cost 2 - 4 = 3,090		Costs 2 - 4 = 2,400	
" 1 - 4 = 3,180		" 1 - 4 = 2,490	
Yeild 10 q/ha		Yield 6 q/ha	
Cost/q = 318		Cost/q = 425	

ANNEX VIII  
Table 1 (Cont)

F M D B

State Seed Farm Baidoa Gu 1982

1. <u>Fixed Costs</u>	
Rent taxes	30
Machine depreciation	<u>440</u>
	470
2. <u>Machinery</u>	
Plowing 1-3 hrs x 80	104
Seeding 2 hrs x 100	200
1st W/ing 1 hr x 100	100
2nd W/ing 1-3 x 100	130
Threshing 2.5 x 24	<u>60</u>
	594
3. <u>Material</u>	
1-5 kg	4
4. <u>Labour + Transport</u>	
W/ing 1.1 m/days x 6	7
Spraying 0.75 m/days x 15	11
Cutting 0.8 m/days x 15	12
Bagging 1 m/days x 15	15
Transport to store	60
"    "    market	80
Guarding	<u>45</u>
	230

Costs 2 - 4 = 830  
 " 1 - 4 = 1,300  
 Yield 8 qu/ha  
 Cost/qu 162.50

MOA Research Services

Farm Management Service

Gu 82 + Der 82/83

1. <u>Fixed Costs</u>	
Tax	10
Other	<u>40</u>
	50
2. <u>Machinery</u>	
3. <u>Material</u>	
Seed 66 kg	198*
4. <u>Labour + Transport</u>	
Sowing 4.5 m/ha at 10	45
1st W/ing 20 m/ha at 30	600
2nd " " 12 " " 30	360
Guarding 27 " " 10	270
Transport to store	70
Threshing	90
	<u>1,435**</u>

Costs 2 - 4 = 1,633  
 " 1 - 4 = 1,683  
 Yields 5.7 Gu 1982  
 " 3.8 Der 82/83

\* Seems very high

\*\*1,320/- shown as hired labour

ANNEX VIII

Table 2

SOMALIA

COSTS

Crop Production Costs

Incentives and Marketing Study

Maize Production Costs (Shs/ha)

F M D B

250 Ha Farm Afgoi.

4 Ha Farm Afgoi

	Gu 1981	1983		Gu 1982	1983
<u>1. Fixed costs</u>			<u>1. Fixed costs</u>		
Rent + taxes	160		Rent + taxes	90	90
Machinery Depr.	<u>69</u>	<u>        </u>			
	229	229			
<u>2. Materials</u>			<u>2. Materials</u>		
Seed 10 Kg	45	45	Seed 8 Kg	28	28
Fuel for pumps	<u>50</u>	<u>105</u>			
	95	150			
<u>3. Machine costs</u>			<u>3. Machine costs</u>		
Plowing 3 hrs	240	360	Plowing 4 hrs	480	480
<u>4. Labour</u>			<u>4. Labour</u>		
Planting	18	30	1st W/ing	480	960
1st W/ing	250*	375*	2nd "	240	480*
2nd "	200*	300*	Harvesting	120	240
3rd "	100*	150*	Threshing	80	80
Irrig. 3 times	135	200	Guarding	150	200
Harvest + Transport	700*	700			
Guarding	160	240			
Supervision	<u>90</u>	<u>135</u>			
	1,653	2,130		<u>1,070</u>	<u>1,960</u>

\* Assumed lightweeding only

\*\*Seems high not altered

ANNEX VIII

Table 2 (Cont)

Total: 2 - 4 =	1,988	2,640
" 1 - 4 =	2,217	2,869
Yield 7.5 q/ha		
Production cost	295.60/q	382/q

Total: 2 - 4 =	1,578	2,468
" 1 - 4 =	1,668	2,558
Yield 6 q/ha		
Production cost	278	426

ANNEX VIII  
Table 2 (Cont)

<u>F M D B</u>		
<u>100 ha Jenale</u>		
	<u>1981 Gu</u>	<u>1983</u>
1. <u>Fixed costs</u>		
Rent taxes	150	
Mach + Equip. Depr.	<u>160</u>	<u>        </u>
	320	320
2. <u>Materials</u>		
Seed 12 kg	40	40
Insecticides	1,000*	1,000*
Pumping 6 hrs	<u>180</u>	<u>180</u>
	1,220	1,220
3. <u>Machine costs</u>		
3.5 hrs	325	420
4. <u>Labour + Transport</u>		
2nd W/ing	640*	1,280*
Irrig.	120	120
Harvesting	160	160
Hauling	40	50
Threshing	25	50
Transport to Market	40	40
Guarding	56	100
Supervision	140	140
	<u>1,221</u>	<u>1,840</u>
Total 2 - 4 =	2,766	3,460
" 1 - 4 +	3,086	3,800
Yield 10 q/ha		
Production cost 3086/q		380/q

\* Assumed lightweeding only  
    applied free by MOA  
    taken as           at 80/-per ka.

<u>MOA Research Services</u>		
<u>Farm Management Survey</u>		
1. <u>Fixed costs</u>		
2. <u>Materials*</u>		
Seed		40
3. <u>Machine costs*</u>		480
4. <u>Labour + Transport</u>		
Sowing 4 md at 30		120
1st W/ing 17 md at 34		580
2nd " 15 " " 31		460
3rd " 12 " " 33		400
Irrig. 4 " " 30		120
Guarding 15 " " 16½		250
Harvesting 10 " " 25		250
Transport		50
Threshing 6 " " 10		60
Bunding 4 " " 35		<u>140</u>
		2,430
Total 2 - 4 =		2,950
Average yeild - 6 q/ha		
Production cost 491/q		
Average cash outlay		1,572

\*Inferred

SOMALIA  
INCENTIVES AND GRAIN MARKETING STUDY  
IMPRESSIONS ABOUT FACTORS AFFECTING PRODUCTION

9.01 Of the three Regions visited, only Lower Shabelle appears to be and to have been in the past, a major food crop surplus production area. There, the Study Team found that there are considerable maize and sesame exports; the first grown mainly in the Gu season and the second mostly in the Der. There is a similar crop pattern in the Middle Shabelle Region, at least in Jowhar and Balcad Districts which have good access to river water; but production seems mostly for subsistence or for "petty trading" in the local market or with visiting nomads. ADC seems to have been more busy with distributing food, partly brought in from elsewhere, than with assembling and exporting locally grown crops. In the short visit paid to the area the Team was unable to ascertain why there is such difference in production between the Shabelle regions.

9.02 In both regions, ADC now buys little if any of the maize and sesame crops. In Lower Shabelle farmers reported that higher prices resulting from open marketing had caused them to expand the cultivated area considerably. In Middle Shabelle the impact of the marketing changes on cropped area was less apparent. One must presume that the increase in the sown area has resulted in greater production, but the Team was unable to measure the increase.

9.03 What are the chances for further production increases? At this point, the Team would again stress the brevity of its visit so that only tentative impressions could be formed. In both Lower and Middle Shabelle all meaningful crop production depends on the River. Therefore the first question is how much spare water is there under existing water control levels for further production? Already in several villages visited the

farmers said that they had planted little maize during the 1983 Gu season because the River had been too low for gravity irrigation (practiced by them) during the Gu season. Consequently further expansion of Gu grown irrigated maize may be limited. Since completion of the reservoir at Jowhar, River flow during Der has apparently improved. Certainly, during the Team's visit the River was flowing full and had caused flooding in several places. Hence, further expansion of Der sesame production would seem more promising than expansion of Gu maize. Increasing Der grown irrigated maize may also be feasible.

9.04 Crop yield data is scarce. A recent overall estimate puts national yields level at about 9 qu/ha maize, 6 qu/ha sorghum and 8 qu/ha sesame. Tables 1 and 2 show yield ranges from 6 to 10 qu/ha for maize and 3 to 10 qu/ha for sorghum. Farmers interviewed by the Team gave similar yield ranges. By contrast, the reported sesame yield seems high by any standard and 5-6 qu/ha may be closer to the mark. Development of recently commenced crop cutting, in connection with crop forecasting services, indicates rather higher maize yields (12 qu/ha) and lower sorghum yields (4 qu/ha) than the above estimates. The system may still need refining but appears to give some promise for improving crop production data.

9.05 Research work at Afgoi suggest that increased maize yields may be possible. Latest trial yields were touching 8 tons/ha, achieved with an improved variety, well-irrigated, weeded and fertilized land and with adequate pest control. Can these results be translated into field practice? The greatest obstacle would appear to be lack of water control. Local farmers and officials talk about controlled irrigation and flooding, but the Team saw few signs of controlled irrigation other than for banana plantations. All other irrigation seemed

to be by some form of flooding on unlevelled or very poorly levelled land. Farmers ability to regulate water distribution on their fields seems limited. Sometimes they cannot get water when they need it, and at other times there is flooding when they do not want it. Only in rare cases is there controlled irrigation. The standard practice is one of flooding, preferably prior to sowing, but quite often after sowing. Thus, for most of the land in most years there is either no water, or not enough water, or too much water. With the heavy clay soils found in the Shabelle Regions, the latter conditions caused as much damage as lack of water. One must therefore treat the chances of an early production breakthrough with new technology with caution. Perhaps vigorous agronomy trials are needed on farmers' fields, to see whether suitable technology can be devised to take advantage of the yield potential of new varieties under present water control conditions. The need for irrigation-works rehabilitation is well known but when this comes it will take time to cover a large area, and trials are needed to see whether major production increases can be initiated now on a large scale.

9.06        There are other major constraints apart from irrigation water control, such as lack of draft power, labour shortage for weeding and pest damage. In the Shabelle Regions nearly all land preparation is done by tractors to which farmers have become accustomed. There is a shortage of draft power and it would seem to be too late to introduce animal draft into these Regions at this stage. There is a good case for increasing the privately owned tractor fleet. Weeding labour shortage is said to be quite serious. Weeds are hard to combat because of very rapid growth and short time in most rainy seasons when weeding can be done on the heavy clay soils. Mechanized weeding has proved very difficult (even at the Kurtun Wary pilot scheme where

tractors are handled particularly skillfully). Therefore, herbicide use may need to be considered. The economics should perhaps be more widely tested. Damage by stalkborer is a recurrent theme, but trials are showing that yield increase with existing technology do not repay insecticide cost of Shs: 2,000/ha. Apparently stalkborer control only becomes economical as part of an inputs package. The constraints listed in this para could be more easily overcome than those connected with irrigation. They would require investments and access to technology advice. Adequate crop production incentives would be needed to encourage farmers to invest, once they are convinced of benefits of the technology.

9.07 With regard to sorghum, there seems to be no technology in sight that would allow a marked increase in yields. Varieties under trial at present have not outyielded, current varieties and there are no agronomy practices known to local Research Services that promise large economic yield increase in the areas visited by the Study Team. With limited and highly variable rainfall, improving yields may be difficult. Perhaps more attention should be given to water conservation techniques like those in use in Northwest Somalia. The Bay Region and similar areas certainly need a dynamic brain-trust exercise and wide ranging trials to see whether a solution to the difficult problem of improving yields can be found. At present, production fluctuates widely from year to year. Farmers' first priority is to ensure sufficient grain in storage to overcome crop failure seasons. There may be several successive seasons with little if any production. Burhakaba District, for instance, is reportedly suffering its third consecutive crop failure season at present. There has been virtually no harvest since Gu 1982. Most farmers only consider sizeable grain sales when their grain stores are full, eg. after consecutive good harvests. In the Bay Region

ANNEX IX

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there appears to be little impact by traders on marketing to date and farmers claim to sell most crops at official prices. Despite the fact that subsistence is uppermost in farmers' minds, when sowing grain, all those interviewed were sure that higher prices would generate higher production. However, climatic conditions would continue to be the major determinant of crop size. This is by no means meant to be an argument against reasonable prices for rainfed crops, but instead, a note of caution that the harsh environment may prove the limiting factor to large production increases.

SOMALIA

INCENTIVES AND GRAIN MARKETING STUDY

Estimates of Unearned Income

10.01 Because Government agencies have sold grain products at prices below those prevailing in local markets, the buyers at such sales have obtained unearned incomes by buying at Governments low prices then immediately reselling at market prices. The term "unearned" is applied because these buyer-sellers provide no service to ultimate consumers (if they do provide either transportation or temporary storage, their compensation for those real services is not part of their unearned income).

10.02 The pasta factory's selling prices are shown in Appendix Table B-3. To estimate unearned income provided on its products during January - June 1983, figures are needed for the quantities it sold and for the prevailing wholesale prices. In the first half of this year, its pasta output was 5,923 tons of which approximately one-third was macaroni and two-thirds was spaghetti. Assuming sales spread evenly over the six months, monthly sales of spaghetti were  $5923 \times (2/3) \times (1/6) = 658.11$  tons.

10.03 Appendix Table B-6 reports monthly retail prices for domestic spaghetti. Table B-7 shows a common mark-up of 40 shillings between wholesale purchase and retail sale of a 10 kilo carton of domestic spaghetti. Wholesale buying prices can, therefore, be estimated for each month by subtracting 40 shillings from the retail price.

10.04 Estimated unearned income from the pasta factory's spaghetti sales, January - June 1983, then follows from these calculations, starting from prices per 10 kilo carton:

Month	Retail prices less 30 shillings	Factory price	Unearned income		
			Per carton	Per ton	Per 658.11 tons
Jan.	120-30 = 90sh	85sh	5sh	500sh	329,055sh
Feb.	160-30 = 130	85	45	4500	2,961,495
Mar.	150-30 = 120	85	35	3500	2,303,385
Apr.	170-30 = 140	92.5	47.5	4750	3,126,022
May	160-30 = 130	92.5	37.5	3750	2,467,912
Jun	170-30 = 140	92.5	47.5	4750	3,126,022
Total:					14,313,892sh

The conclusion is that during this period, unearned income totaled over 14 million shillings.

10.05 The same paradigm can be applied to each grain product sold by the Government below market wholesale prices. One more example, for rice in 1982, draws on Appendix Table B-7-h to identify a markup of 148 shillings per 100 kilos. If ENC sold the 41,000 tons it received during 1982 in that same year and spread sales uniformly over the 12 months, its monthly rice sales were 3,417 tons (if sales were greatest in months of low market prices, the estimate made here will overstate unearned income). In this case the conclusion is that unearned incomes reached almost 96 million shillings on ENC's sales of rice during 1982.

Month	Retail prices less 148 shillings	ENC price	Unearned income		
			Per 100k	Per ton	Per 3,417 tons
Jan.	1431-118=1283sh	839sh	444sh	4,440sh	15,171,480sh
Feb.	1706-148=1558	839	719	7,190	24,568,230
Mar.	1611-148=1463	839	624	6,240	21,322,080
Apr.	1250-148=1102	839	263	2,630	8,986,710
May	1267-148=1119	839	280	2,800	9,567,600
Jun.	1271-148=1123	839	284	2,840	9,704,280
Jul.	1164-148=1016	839	177	1,770	6,048,090
Aug.	1067-148= 919	839	80	800	2,733,600
Sep.	829-148= 681	839	-158	-1,580	-5,398,860
Oct.	1033-148= 885	839	46	460	1,571,820
Nov.	1016-148= 868	839	29	290	990,930
Dec.	1000-148= 852	839	13	130	444,210
	TOTAL:				95,710,170sh