BRAZIL AND WORLD FOOD SECURITY – THE VIEW FROM THE WORLD BANK

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1. I am pleased to participate in these important discussions about Brazil’s agricultural development. From the perspective of the World Bank there are three basic reasons for the importance we attach to the issues on the agenda of this conference. First of all, Brazil is by far the Bank’s most important borrower and agriculture is a critical component of our current as well as prospective portfolio. Second, food production achievements in Brazil are an increasingly vital underpinning for world food security. And thirdly, we believe that the technical innovations, managerial expertise and policy experiences developed in Brazil have great potential for application in many of the Bank’s other 138 member countries. This is particularly relevant to the large scale development of the subhumid tropics of East Asia and Africa.

2. My presentation will start with a brief description of the World Bank Group and its overall relationship to Brazil’s external financing requirements. This will be followed by a review of the evolution of Bank policy and operational experience in the agricultural sector throughout the world. I then propose turning to a short description of current activities in Brazil. The paper’s conclusions will deal with future opportunities, focussing on the contribution Brazilian agriculture can make to the world food situation.

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(ii) **WORLD BANK GROUP**

3. The World Bank Group’s overall task is to provide technical and financial resources to stimulate soundly-based economic growth primarily through project lending to member countries. No less important is our commitment to protect the resources entrusted by the countries who subscribe capital and by those who buy IBRD Bonds. To this end, Bank projects must be financially viable, technically feasible, managerially sound and yield a rate of return at least equal to average returns from other investments in the borrowing country. Evaluations of completed projects by borrower governments and the Bank’s internal audit unit indicate that in the main these criteria are being applied successfully.

4. The high standards demanded of Bank-supported projects extend through the implementation period. The Bank requires that procurement of most goods and services take place through international competitive bidding to endure both high quality and low price. Loan disbursements are made only on receipt of proper documentation and Bank staff make regular visits to projects being implemented by borrower governments. At present the Bank Group has under supervision over 2,000 projects in about 75 countries. In FY1981 annual commitments were US$12.2 billion with disbursements of US$7.0 billion. The undisbursed balance of current loans totalled US$30.3 billion.

5. The Bank’s organization and structure has evolved since it was established immediately after World War II. It now includes three distinct legal entities, each with separate assets, liabilities and capitalization. These are:
The International Bank for Reconstruction and Development (IBRD). This entity uses the equity entrusted to it by member governments and earnings retained from 35 years of profits to borrow in the world capital markets and lend to developing countries. Loan terms are repayment over 18 years, a five year grace period and interest rates reflecting the full cost of our borrowings and administration at a current rate of 11.6%. This is about 40% less than the average cost of recent borrowings in the US and Eurocurrency markets by developing countries such as Brazil. IBRD bonds are rated AAA and are held by investors in over 90 countries. In its 30-year history there have been no defaults. It has recently been agreed that the Bank would double its capital from US$40 billion to US$80 billion. There are now 134 member countries of the IBRD and current annual commitments are about $9 billion.

The International Development Association (IDA) was created in 1960 when it became apparent that the cost of servicing external debts was becoming unmanageable by the poorest countries. IDA was therefore set up to recycle funds from richer member countries including Brazil and IBRD profits. Project credits from IDA are provided only to poorer countries, primarily in Africa and Asia, where the GNP per capita of less than US$320 (1977 prices). Lending terms of these credits are non-commercial with a repayment period of up to 50 years, no interest charges and a service charge of 0.75 percent per annum. The IBRD and IDA are administered by the same personnel and projects meet the same criteria. IDA has 121 members. Commitments are running at a current annual rate of about $3.5 billion.

The International Finance Corporation (IFC) was created in 1956 to foster the growth of the private sector equity financing in developing
countries. IFC obtains funds largely from member country subscriptions, and the IBRD itself. It has 109 members. The IFC collaborates with the private sector in directing resources, both domestic and foreign, into productive investment in member countries. It organized $3,340 million worth of capital for LDC enterprises in FY1981 in addition to other important activities developing the domestic financial markets of countries like Brazil.

(iii) World Bank and Agriculture

7. In the immediate post war years there was very little concern about agricultural development, both within the newly established Bank and in the Development Community at large. The path for development was seen to be through industrial development with accompanying investment in urban oriented infrastructure. An emphasis on heavy industry was encouraged by popularly held views, including Marxist ones, which tended to ignore agricultural development and saw a steady erosion in agricultural terms of trade against manufacturing. The general assumption was that there was plenty of land and idle labor; the limit on raising agricultural output was a low level of demand and this would be raised by urbanization and industrialization. Agriculture was seen as a source of capital and labor for use in other sector. Many countries including Brazil penalized the farm sector indirectly through overvalued exchange rates and directly via government controls to keep urban food prices low.

8. By the late 1960s it had become apparent that the import substitution and industrialization oriented development strategies had not worked. The expected decline in the terms of trade for agricultural products had not materialized. In fact, demand for tropical products and
other food products remained strong and technical advances permitted relatively high returns for incremental output of commodities whose real prices stayed steady. In the populous land scarce countries of Asia food supply problems had grown into problems of global dimensions. The combination of a greater awareness of the socio-economic importance of agriculture and the availability of a technology that increased yields encouraged the Bank to expand its participation in agricultural development. Lending for agriculture rose from $40 million a year to $500 million a year in the decade of the 1960s. The major investments were for livestock in Latin America and for irrigation, especially in Asia; the larger part of the lending was still for exported orient agriculture. The agricultural lending in Brazil was for large scale livestock development in the Center south.

9. Lending for agricultural development accelerated even further in the 1970s. There appears to be three principle reasons for this. First as grandiose schemes for industrialization failed it became more and more apparent that agricultural development was central to the economic development of many countries; a view that was reinforced by the food shortages of the early 1970s and by the World Food Conference. Second there was a much better understanding of what was required to promote and encourage agricultural development i.e. that agricultural development depended on a support system of many parts and that substantial investments were needed for many of the components in the system. Third it became increasingly apparent that there was deep seated poverty in rural areas so that efforts to alleviate poverty, a major objective of development had to incorporate efforts to raise the output and incomes of the lowest income groups in agriculture.
Lending for agriculture and rural development rose to about $4 billion a year in the early 1980s — about a third of the total Bank lending. Bank strategy has been based on the assumption that farmers are rational decision makers who would increase production if given an opportunity to do so. This meant providing knowledge to farmers as well as the means and incentives to use that knowledge. Investments have aimed at improving research, capabilities, extension as well as general and on-farm infrastructure. Thus, the lending program for agriculture as a whole and in Brazil in particular, expanded on a broad front, in an attempt to strengthen the whole agricultural system in many parts of the tropics.

11. The need to come to grips with pervasive rural poverty has brought about a substantial expanded focus in much of our loan portfolio for agriculture. A substantial number of loans made by the Bank are designed to help low income, low productivity producers raise their output and incomes. In our view, this can best be done by ensuring that small farmers, tenants and share croppers are given access to the same sort of services as are other producers. As a result many of the projects financed by the Bank provide credit facilities for low income producers to enable them to acquire seeds, fertilizers, pumps and the like. Additional projects are designed to see that small farmers have access to water, market and storage facilities. This shift in emphasis has required a great deal of effort in strengthening institutions that deal with small farmers as well as allowing small farmers greater and secure access to land.

(iv) World Bank and Brazilian Agriculture

12. The Bank’s program in Brazilian agriculture has paralleled the changing policy I have outlined. We have invested close to a SUS 1.0
billion in the process a total investment of more than $2 billion in 21 projects and I would identify four major types of projects which cut across the multiple objectives of lending:

13. Basic foundations. A basic activity has been our large scale support for strengthening Brazil’s agricultural research capability. A Bank-financed EMBRAPA program of several hundred million dollars has been evolved to strengthen the administrative, physical and technical capacity of the institution to increase productivity of commodities with high national priority. In addition, the program was designed to facilitate the two-way flow of information and collaboration between EMBRAPA and the International Agricultural Center network in crops and livestock suited to Brazilian conditions. Paralleling our investments for research is a project to improve EMBRATER, the extension corporation. We believe these particular investments will make a major contribution to resolving the problems of the Centerwest where the resolution of technological problems will open up prospects for a substantial increase in production.

14. Expanding farm areas into the North and North Central. Emphasis on needed transport facilities and appropriate agricultural technology has led to Bank support, in line with new national priorities, for land settlement consolidation and agriculture development projects in the Northwest and Amazonian regions. This geographic focus has created the need to develop technologies which will enable high yielding, sustained and economically viable agricultural and forestry enterprise in the humid tropics. The scale and dynamic nature of new land development in the Northwest Region provided an unparalleled opportunity to test innovative technical and institutional approaches to sustainable tropical land development. For
example, questions of environmental degradation, stability of settlement, full exploitation of forest resources and attraction of private capital and entrepreneurial talent into frontier areas have all emerged from our collaborative work.

15. **Raising rural productivity of the poor.** Thirteen projects with $400 million worth of Bank support are underway that provide irrigation, land consolidation settlement and infrastructure benefiting small farmers. Eleven of these were designed as part of the Brazilian government’s commitment to close the gap between incomes in the Northeast and the rest of the country. The beneficiaries are largely low income rural households who benefit from the extension of better technical packages, land settlement, access to assets and better rural infrastructure including roads and marketing facilities. The aim is to increase output and incomes of those who participate in these projects.

16. **Trade promotion and import substitution.** Since the late 1960s the Bank and IFC have invested almost $500 million to help develop agro-industrial enterprises. Beginning in the 1960s we assisted in the creation of the export corridor transport systems needed to move agricultural commodities to markets. A series of joint planning exercises were undertaken with GEIPOT that led to multibillion dollar investments that have been essential ingredients in the successful development of Brazil's export potential. Investments in slaughterhouses, storage and soya processing have permitted higher value exports. They are a critical factor behind Brazil’s success in becoming the world’s fastest growing and second largest exporter of agricultural commodities. More recently, the Bank has made resources available to the development of indiginous renewable biomass resources to replace petroleum imports.
17. A comprehensive analysis of the effects of Bank lending for agricultural projects is available from the independent evaluations of those projects which have been completed in recent years. These evaluations cover about 200 projects with a total investment of close to $7 billion. In looking at the impact of projects it must be borne in mind that the effects of lending often extend beyond direct project impact; the Bank is a partner with governments not only in financing projects per se but also in formulating decisions which influence the whole process of agricultural development. The objectives of development are wide ranging and might well encompass elements such as reducing rural-urban migration and improving urban food supplies. There is, however, one common denominator for all projects that incorporate investments to increase production. This is the economic rate of return. There are many pitfalls and problems in using this measure. Having said this, the audits show that eight of ten of the projects yielded real returns in excess of 10%. The overall weighted average was about 20% — about three times the current real interest rates.

18. The analysis of global project results points up the economic rational for small farmer development. Projects specifically designed to help lower productivity rural households offered average returns in access of 25% and benefited almost two million farm families throughout the world (equivalent to 2/3 the total farming population of Northeast Brazil). Impact on food security has been equally important. We estimate that developing countries, China excluded, have in recent years been able to increase annual cereal production by about 14 million tons a year. Audits indicate incremental annual grain production generated in bank projects has exceeded two million tons — about 15% of total growth.
19. At the same time these audits have highlighted problems of particular importance to Brazilian agriculture:

**Institutional Effectiveness.** Designing programs to assist the poor require efforts to better tailor programs to meet the needs of the small farmers. Equally important are improvements in the management capacity in the institutions responsible for implementing such programs -- this applies particularly in the Northeast.

**Rainfed Agriculture's Technology Base.** The only class of projects with systematic problems are those which introduced more intensive farming systems into the tropics. Experience indicates that yield estimates tended to be over optimistic and insufficient attention was devoted to weather related risks and sustaining production. This is a problem of importance in various parts of Brazil.

**Financial and Marketing Systems.** The record with government interventions in commodity markets and rural financial systems is mixed. In many instances public sector marketing and storage monopolies substantially reduced net distribution capacity and efficiency. Similarly, distorted credit policies have other weakened rural financial institutions reduced incentives for saving, precluded rational private investment and proven generally ineffective policy instruments. Action in this regard is largely a matter of government policies.

(v) **Brazil and World Food Security in the 1980s**

20. I would now like to turn to the future and begin by presenting an overview of the 1980s world food economy. This will be followed by a brief
analysis of the Brazil's opportunities and the sorts of help we at the World Bank might offer in meeting them.

21. Recent events in the global food system provide some interesting perspective on the course of developments in the next few years:

... At a global level food production has more than kept pace with population.

... There has been an explosive growth in World trade in grains. Most of the increase in trade is related to higher income and concomitant growth in feed demand which now exceeds 600 million tons of grains and soya (over 40% of total world supply). The lowest income countries have actually increased their self-sufficiency somewhat while the relatively more affluent countries of the Soviet Bloc, high growth Asia, Western Europe and the oil exporters have become massive importers. Brazil's emergence as the world's second largest food exporter is intimately related to these changes.

... The complex of interdependent cash commodity, futures and financial markets have served the cause of food security exceptionally well. This is demonstrated by the world's ability to manage through the potentially difficult conditions of recent crop years (despite predictions of imminent disaster offered in many quarters). In the event of poor weather, leading to price increases, grains are diverted away from feed to food -- thus providing an extremely reliable global food security "buffer stock".
... The ability to provide reliable and cost competitive food supplies is increasingly dependent on marketing efficiency. This is of obvious relevance in Brazil. Recent studies have shown that while unit costs of production are far lower here than in the USA relatively higher marketing costs more than compensate for the farm level efficiency. This puts Brazilian farmers and processors at an unfair disadvantages.

... Futures markets have become critically important. They are 30 times more liquid than only seven years ago and provide the most efficient possible vehicle for dealing with the concurrent five-fold increase in commodity price volatility.

... Future increases in food demand will continue to be linked with the rate at which population and per capita incomes grow. In our view international trade will grow as income rise; competition will be keen but Brazil has an opportunity to expand grain and vegetable oil exports provided the agricultural and marketing sector can become more productive.

22. The implications of this general view are obvious for Brazilian agriculture. Our mutual experiences in raising farm productivity demonstrates the high returns that are possible. But at the same time we must recognize that while prices will remain strong the emphasis will have to remain on productivity and competitiveness. Further, the global cost of capital can be expected to remain high -- a return to negative interest rates is simply not going to happen. I would now like to discuss the implications of this overview to Brazil and what we might view as priority issues in Brazilian agricultural development.
Sustainable increases in productivity. Brazil's great untapped farming areas of the Centerwest and parts of Amazonia are undoubtedly one of the world's great long term food security reserve. But just as short run security can be provided by the extremely price responsive nature of the feed economy — small increases in meat price driving consumption down in a single season — so must we all recognize that it is the net cost of sustained production in these areas that matters. This includes ecological costs. Further, serious technical issues remain about the most profitable way of tapping the agricultural potential of tropical highlands and humid rainforests. The Bank expects to cooperate with Brazil in dealing with these issues in what will certainly be an important expansion of farm area.

Marketing and rural financial services. It is critical to make Brazilian agriculture more competitive through selective investments and policy changes that increase efficiency. In this regard we feel that there is a need to develop better marketing and financial support. In particular we feel that there is scope for better use of futures markets. Our analysis has shown that in the U.S.A. the multinational grain companies are able to cover their marketing costs with only a 5-10¢/bushel margin. This is possible only because they isolate price risks from real value adding commercial activities associated with transport, handling, storage and processing. In other words, agroindustries are able to concentrate on their business without worrying about inventory price values. Without such risk management we and others have estimated that marketing margins would be in the 50-60¢ bushel range — a tenfold increase. For various reasons, Brazilian firms do not seem able to take advantage of hedging to this extent and so the competitiveness of the entire farming sector suffers
accordingly. This disadvantage can be eliminated and Brazil can and should develop the sorts of domestic rural financial and commodity market services required to meet the needs of a major food supplier. We hope to see Brazilian commodity exchanges once again become the equals of those in London, New York and Chicago.

23. **System for Efficient Investment.** An important consequence of providing ways for risk management is the encouragement provided to capital investment. The lack of such instruments is a major cause of the acute financial position of most domestic agro-industrial and marketing concerns in developing countries and is made worse by parallel distortions in capital markets. Needed private sector investments can simply not take place in the current environment despite the fact that the potential returns are more than adequate. The challenge is to create a commodity and capital market system where such investments become prudent. A first step in this direction would be to reduce the uncertainty which investors feel when considering the course of future government interventions. Constant change is a major impediment to the efficient management of existing resources as well as the investments needed for future growth. The question of domestic interest rate subsidies, the lack of foreign exchange futures and such are not merely critical for Brazilian competitiveness but will be vital in determining future global food security.

(vi) **Conclusions**

24. **Brazil will play a major role as a food exporter.** But it will only fill its role if the government adopts policies which emphasize efficient use of resources including the adoption of sustainable technology, development of infrastructure and the creation of an effective
marketing system. The capital needed for this will be very large but the Bank is prepared to help fill these requirements through financing economically viable projects—including agriculture, rural development, forestry operations and feels that the requirements are manageable. We hope to join with the Government in this effort which, in time, will have important consequences on global food security.