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IFPRI — New Frontiers

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INTERNATIONAL
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Opening Remarks

I am grateful to have this opportunity to address this audience. I look forward to talking to many of you individually in the coming months. The International Food Policy Research Institute is now in its mid-teens. Under the stewardship of my illustrious predecessor, John Mellor, IFPRI has made significant contributions in areas ranging from technology policy and food subsidies to trade policy and rural infrastructure. We look forward to an exciting future, which can build on a solid track record and wide experience in food policy research.

The foundations of our research have been rooted in the identification and analysis of alternative strategies for improving the food situation of developing countries and in the reduction of hunger and malnutrition. The new frontiers we now are crossing involve linking food policy with environmental policy, linking our research ever more strongly with other Consultative Group centers, and linking our capabilities ever more closely with those of developing country partners.

The Institute's research has a strong policy orientation, with the aim of providing policymakers, research scientists and administrators with information and tools to pursue more effective and sustainable agricultural and food strategies. Studies are generally aimed at assessing the efficiency of existing national and international food-related programs and at identifying alternatives for policy.

Over the last few years, IFPRI has expanded its microeconomic research capabilities through its involvement in field-level data collection. These surveys, conducted in all developing regions of the world, have focused on production and employment, income and consumption, and trade and distribution at the household and farm levels. These activities bring IFPRI researchers into close contact with the poor, our ultimate target group. In this important work, IFPRI collaborates with developing country

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institutions, and thus helps to strengthen local expertise, and to provide information relevant to policy design and implementation.

I hope to give you today a report—necessarily only a selective report—on where we are now in terms of our programs and projects, and also a sense of the contributions we can make through our research to bring about a more profound insight into the policy issues of food and nutrition, hunger and poverty. I also hope to give you an idea of where we see ourselves going.

IFPRI is now embarking on a process of formulation of a strategic plan for its research and outreach, with institute-wide participation, extensive consultation within the research community worldwide, with stockholders, clients, and beneficiaries, and with guidance from the Board throughout the process.

As I have now come to know the ongoing work of IFPRI, I have found that the absence today of an up-to-date, explicit, and agreed formal strategy document in no way has resulted in lack of focus or cohesion in its work. IFPRI's research does span a wide spectrum—and appropriately so in this complex and diverse world of food policy research. Yet, the research at IFPRI, as I now know it, is not wanting in policy relevance, strategic orientation, or intellectual verve. But, we must be confident that we can keep it that way, leaving some activities behind us, perhaps, adjusting the course and being ready for new opportunities where our involvement can make a difference and which are central to our mandate. Hence our determination, in the staff and in the Board, to proceed with the strategy work as a matter of priority and urgency.

In presenting this report to you, I recognize that I do so with the disadvantage of one who has been closely involved with IFPRI for only a couple of months, but this perhaps also gives me the advantage of seeing the Institute from a fresh perspective.

World Food Situation

I will begin by taking a brief look at the world food situation. The majority of the world's population is food secure, with the means to ensure a sufficient food intake for an active and healthy life. However, due to absolute poverty, hundreds of millions of people in developing countries—in both urban and rural areas—consume less food than is needed to meet minimal nutritional standards. Millions of others are vulnerable to adverse climatic, economic, or social changes that can push them from apparent food security into the painful reality of hunger.

Globally, agriculture produced a relatively favorable food supply in the mid-1980s. This created the temptation to lose sight of the persistent challenge of achieving the necessary food supply expansion and to focus instead on the complementary measures required to improve household food security. However, real food security in developing countries can be achieved only when effective policies are put in place both for accelerated food output growth and for sustained income generation by the poor. Growth in food production can be the critical and dynamic factor in bringing this about in low-income countries because it can provide both increased food supplies and expansion of rural employment and income of the poor.

Technological advancements, large investments in irrigation, and, on balance, also somewhat better policies during the last three decades have resulted in substantial growth in crop yields and food output. Since the 1960s, the cereal production of developing countries (excluding China) has increased by about 85 percent. Still, adequacy of and access to food supplies remain global concerns, with per capita food production declining in many years. Cereal markets are highly volatile and sensitive to changes in supply prospects or unexpected increases in import demand, further jeopardizing world food security.

The food supply situation remains particularly serious in several Sub-Saharan African countries, most notably in Ethiopia and Sudan, but also in Mozambique, Angola, and Liberia.

Supply Issues In Asia

In Asia, area expansion, which contributed 30 percent of growth in Third World food output in the 1960s and 20 percent in the 1970s is now of minor importance. Nearly all food production increases during the 1980s were achieved through the growth in crop yields.

The composition of food demand is changing in much of Asia with the gradual but cumulative increase in per capita income. The heavy reliance on cereals is giving way to a preference for noncereals such as fruits, vegetables, livestock products, and processed foods. The rise in cereal output per hectare has been such as to make more land available for alternative crops, potentially providing an opening for policies aimed at pursuing a sustainable and more diversified growth path in agriculture.

In many Asian countries, the use of modern rice varieties and fertilizers is already high. Together with the difficulty of making continual breakthroughs in yield potential for rice, this makes sustained growth in rice productivity troublesome. The problem is compounded by the sharp decline in irrigation investment in the 1980s and the increasing costs of future irrigation expansion.

A major IFPRI research project in collaboration with the International Rice Research Institute and national research institutions from several Asian countries analyzes the medium- and long-term implications of future rice supply and demand, looking in detail at sources of growth, technology and policy issues, and world rice market developments. A related project involves examining the trends, priorities, and policy directions for irrigation investment in Asia. Other work examines diversification issues, particularly in feed grain and livestock. These, and other ongoing IFPRI studies, will provide insights into policy options during this period of transition in Asian agriculture.

Trends in Sub-Saharan Africa

Sub-Saharan Africa is the only major region in the world where per capita food production has declined over the past twenty years, and the food situation is expected to become even more grave in the 1990s, reflecting continued massive increases in population. IFPRI projections show that by the end of this century, Africa's net imports of basic food staples may be seven times that of the early 1980s, and given the likelihood of rising real world prices the cost may grow perhaps tenfold.

The inability of Africa to feed itself is compounded by environmental degradation, some of which may be irreversible. Yet, the continent's potential for food production—and sustainable production—is far from being fully mobilized.

The main priority for IFPRI's work in Africa is to identify options for increasing the productivity of agricultural labor so as to alleviate the basic source of the extreme poverty of the majority of rural based Africans.

IFPRI is currently involved in collaborative research agreements with national research institutions and universities in 18 Sub-Saharan African countries. Our work includes research on various constraints to improved agricultural technology in Burkina Faso, Senegal, Niger, The Gambia, Zambia, Zaire, Zimbabwe, Sierra Leone, and Rwanda. Research continues on the impact of policies on the welfare of the poor in seven African countries, ranging from Ethiopia to Burkina Faso. A further study is being completed on the impact of trade and macroeconomic policies on agricultural growth in Nigeria and Kenya.

Trends in Latin America

Many countries in Latin America, with heavy debt service payments, reduced investment, deep cuts in public expenditure, and very low commodity prices, have suffered from negative growth rates in real GDP per capita, and high

levels of environmental degradation. Levels of absolute poverty are on the rise in several countries, as agricultural growth rates slacken, and the purchasing power of the urban and rural poor is whittled away by inflation and unemployment. Ample scope for both policy improvements and technological innovation exist, but increased and improved collaborative agricultural policy research is absolutely essential in many cases.

Poverty Alleviation

Poverty alleviation is a major objective of IFPRI's work. Our research is primarily focused on *absolute* poverty. Food consumption figures prominently in this work. The basic premise of IFPRI's poverty research is that sustainable development requires both a comprehensive employment-oriented growth strategy, which incorporates the poor, and the maintenance of effectively targeted measures to assure alleviation of absolute poverty.

The three central areas requiring our increased attention in poverty alleviation research are: (1) high rates of population growth which both increase pressure on land resources and affect farmers' demand for new technology; (2) highly diversified income structures of the poor which are increasingly nonagricultural also in rural areas; and (3) highly unstable incomes of the poor because of production, market, and policy risks.

The poor diversify their income at the household level to cope with the serious risks associated with relying on income from only one source. The development of nonfarm sources of income may emerge as key instruments for overcoming constraints of the increasingly resource-poor population and to maximize returns to investments in public goods such as education, infrastructure, and agricultural technology.

The set of policy instruments designed to guarantee household food security needs to be better understood and tailored to specific country circumstances. These instruments include price stabilization, self-targeting public works, health and sanitation promotion, and more efficient and effective feeding programs. Through helping to design institutions to monitor and supervise the implementation of food security policy modules, IFPRI hopes to strengthen the institutional capacities of low-income countries to assess and respond to food insecurity.

Women in Agriculture

Given its policy orientation, IFPRI is well placed to examine the full range of women's food related roles, both within and across sectors, looking at

linkages between agricultural and nonagricultural activities, and examining constraints on, and opportunities for, women to improve the welfare of the entire household. Our research considers women both as users and as indirect beneficiaries of technological change in agriculture—as individuals and as members of households allocating resources for household production, consumption, and nutrition.

The role of women is central in both agricultural production and in translating it for household food consumption and nutritional status. IFPRI is currently studying the effects of technological change on women's income and economic role, labor allocation patterns, expenditure and food consumption patterns, and the health and nutritional status of household members.

To date, much of IFPRI's work has indicated that the effects of a range of agricultural policies and programs are usually not gender neutral. A five-year IFPRI project, which has just started, will build on earlier IFPRI work and examine not simply the impacts of selected agricultural policies and programs on women, but equally important, identify ways to enhance the impacts of agricultural technology on women's health and nutritional status. The project will test a variety of actions, including use of extension, credit for women, and health promoting activities aimed at women.

In most of IFPRI's overall research on food consumption and nutrition, as these relate to shifts in agricultural practices and technologies, the question of women's roles in the process is also being examined. The results of this work highlight the significance of women's control of income and their effective access to technologies and production inputs for improving household food consumption and children's nutritional status.

As IFPRI and the CG system as a whole move into new areas such as natural resource management and forestry, research into the roles of women and their access to resources will be a particularly exciting and rewarding component of our activities.

Policy Messages from IFPRI Research

Trade and Exchange Rate Research

IFPRI's pioneering work on trade and exchange rate policies has documented, in a series of country studies, the important if not overriding influence of those policies on production incentives for agriculture. The combined effect of sector-specific and economy-wide price interventions is shown to have resulted in strong incentives against tradable agricultural goods, contributing not only to a relatively inferior agricultural performance and

lower farm income but also inhibiting overall economic growth, and to that extent this works counter to poverty alleviation. Officials at ministries of agriculture could play a broader role in promoting agriculture's interests, placing themselves on the side of policy reform to reduce industrial protection, strengthen the financial system, foster fiscal discipline, and rationally manage the nominal exchange rate. It is of paramount importance that developing country governments develop the institutional arrangements necessary to ensure that agricultural policymakers are not left out in the formulation of trade and macroeconomic policies.

Over the past ten years, a number of developing countries have undertaken substantial reforms of their trade, agricultural, and macroeconomic policies. IFPRI has initiated research on what we call the "*transition problem*," based on the experiences of Nigeria and other Sub-Saharan African countries that are implementing structural adjustment programs. Research in The Gambia and Senegal, for example, shows that the dismantling of monopolistic state structures was not followed by private initiatives to replace them.

IFPRI is also increasingly concerned with food security issues in the longer term. In Zimbabwe, research implicitly addresses the question of production strategies in lower potential agricultural areas and suggests the need to look at drought-tolerant crops to increase food security of small farmers in the semiarid regions of the country.

IFPRI's research on famine has brought out the need for development-oriented prevention measures that are tailored to national and regional economic, social, and ecological environments. Priorities include employment-generation schemes that create useful infrastructure that functions under stress; liberalization of interregional trade; resource conservation; and enhancement and development of rural financial markets.

Special attention is being given to the implications for food and agriculture and to the distribution of gains and losses among different socioeconomic groups. A major objective of this research is to develop analytical approaches that will help policymakers anticipate the likely sources of resistance and support for policy reforms.

Irrigation Research

Irrigation continues to be an important research topic at IFPRI, in collaboration with national research institutes. One of the primary areas of work has focussed on the assessment of investment requirements within countries to meet growth in national food demand and also on analysis of the productivity and cost-effectiveness of alternative types of irrigation investments, including combined use of surface and ground water irrigation,

investment in a variety of new systems, and rehabilitation of existing irrigation systems.

The 1980s were characterized by a sharp decline in new irrigation investment and a relative increase in the rehabilitation of deteriorated irrigation systems. Irrigation investment in Asia by the four main donors for irrigation development reached its peak in 1977-79 and dropped by about 50 percent by 1986-87. Accompanying this decline has been a decrease in the growth rate of irrigated areas, of 60 percent since the 1960s for the world as a whole.

IFPRI research shows the cost-effectiveness of major rehabilitation works to be highly variable, and thus we suggest caution with this approach, with a partial reallocation of funds to investment in new systems. In the future, IFPRI plans to conduct research to determine whether lower-cost rehabilitation options, such as desilting and reshaping of canals, could generate similar benefits.

Infrastructure and Agricultural Production

The appropriate role for infrastructure, particularly rural infrastructure, in the economic development of developing countries has remained a largely unexplored and underrated issue. Empirical evidence from a variety of IFPRI studies demonstrates that spatially and economically well planned infrastructure can have substantial positive effects on the demand for production and consumption goods and services. In infrastructurally developed areas, marketing of modern inputs is easier and cheaper, factor and product markets operate more efficiently, and extension agents and health care practitioners can more easily provide services.

The positive impact of infrastructure is highly dependant on the overall policy environment. Infrastructure development is by no means a substitute for effective policies: instead it provides the necessary environment for public policies and private investment to perform and prosper.

Commercialization of Agriculture

While *generally* positive, the nutritional impact of increased commercialization of smallholder agriculture in developing countries is not *always* favorable. In collaboration with other institutions, IFPRI has conducted research in ten countries at carefully selected program and project sites where farm households have recently undergone a change from semi-subsistence staple food production to production of crops for sale in the market and/or production with new inputs and technology.

We found that, in general, nutrition improved or at least was not adversely affected when small farmers shifted into cultivating sugarcane, maize, vegetables, and rice for export. Commercial agriculture also expanded the demand for hired labor and thus created jobs. In the Philippines this translated into benefits for women who spent less time in the fields and more at home caring for the family. Where higher incomes, resulting from commercialization of smallholder agriculture, were used to provide better health and sanitation facilities, as in Guatemala, the nutrition levels of children improved. However, these improvements were found to be surprisingly small where the increases in poor people's incomes, as a result of cash cropping, were not accompanied by expanded public investment in health and nutrition delivery systems.

Our analysis brought out four pillars of a successful policy in this area: *first*, the parallel promotion of technological change in both food and cash crop production; *second*, effective integration of small farming households into schemes for commercialization and technological change; *third*, attention to land tenure and access to land when net returns to land substantially increase; and *fourth*, the promotion of community health and sanitation services in order to maximize the health and nutrition returns of increased income in a sustainable manner.

Environmental Externalities of Growth and Poverty

IFPRI is introducing into its medium- and long-term strategy a greater emphasis on environmental policy for sustainable agriculture. Our contribution in this area stems from our focus on poverty. Poverty and environmental degradation are inextricably intertwined in the vast majority of the developing world's rural areas. As rapidly expanding poor populations move into increasingly fragile areas, permanent losses of resources and increased erosion result.

IFPRI's approach to natural resource management stems from our belief that the primary causes of environmental degradation in the developing world's rural areas are closely linked to poverty. In order to survive, rural residents are forced by low levels of agricultural productivity, lack of economic alternatives, and short-term survival needs to "mine" private and communally-held resources. IFPRI's research in Brazil, Peru, Nepal, and other countries shows how and how far the lack of infrastructure and appropriate socioeconomic and technology policies leads to land degradation. The mix of macroeconomic policies and local interventions best suited for achieving the dual goal of poverty alleviation and decreased environ-

mental stress is likely to be region-specific and quite complex. Finding that mix should be the focal point of our research.

Given our traditional macro policy focus and strong micro-level research base, IFPRI is in a position to trace the impact of national or regional policies (such as price and subsidy policies) through farmers' land-use decisions to the level of environmental impact. Natural resource management research must include the problems of small farmers in environmentally threatened areas, as well as the implications of past environmental degradation on current farmer decisions.

IFPRI, like our sister centers and the CG system at large, is in the process of sorting through the many policy issues relevant to natural resource management and sustainable agriculture, in an effort to identify the themes and geographic areas in which we have a comparative advantage and can make important contributions. In concert with our search for a timely and relevant research agenda in this important area, we stand ready to cooperate with centers in the CG system, in any way possible, in setting research agendas for the future. For example, in our search for research priorities in the area of forest policy, IFPRI is planning a workshop in early 1991 to explore, with specialists from around the world, the significant forest policy issues where we could make effective contributions.

Capacity Building and Collaboration

One of the most serious deficiencies in policy making in the developing world lies in the lack of an appropriate research base to generate the knowledge needed for effective policy decisions. Third World governments' capacities to effectively influence the food sector will remain limited unless policy decisions are grounded in an understanding of both the actual and potential effects of policy on economic behavior.

Given the scale and heterogeneity of the developing world and the modest size of IFPRI's resources, our forte lies in serving as a model or catalyst for developing countries in showing the way to conduct food policy research; we cannot ourselves ever aspire to meet all the food policy research needs throughout the world. Only in special circumstances does IFPRI insert itself into the process of formal training, which as a rule is best left to universities and specialized national institutes, unless IFPRI has new techniques to impart that are analogous to the teaching content of other CGIAR institutions. We place a premium on building national capacities for policy research by providing analytical frameworks and techniques that are readily adaptable to national research systems and to the analysis of food problems in their respective countries. Typically, in IFPRI's field work, this

process includes transfer of skills designed to administer and interpret surveys at the farm and household levels to measure the impact of technological change in agriculture on production and marketing, employment and income, and consumption and nutrition.

In its current Medium-Term Plan IFPRI has placed high priority on increasing the number of developing-country researchers receiving such support, not as formal training, but through direct collaboration with IFPRI. We are now three years into the plan, and during this period, the level of such collaboration has already increased by more than 50 percent.

By way of illustration, let me draw attention to West Africa, where IFPRI researchers are working closely with colleagues at the University of Ouagadougou, ISRA in Senegal, and INRAN in Niger, from the design of field work through the analysis stage, and to policy workshops. There is now a strong demand by Sahelian researchers and government officials for the survey methodology and analysis documents that came out of this work. Methodology guides from this work are now being used in Togo, Mali, Côte d'Ivoire, and also in Brazil.

IFPRI's collaboration with other CG centers facilitates the use of, and enhances the returns on, new agricultural technologies produced at these centers. The effort to increase system-wide resources for policy research recognizes that development processes based on new technologies depend on appropriate policy environments. Three senior staff from IFPRI are currently posted to other CG centers and one to the IFDC in Togo. Our collaboration with other centers includes projects on the policy impacts of coarse grain production, consumption, and marketing with ICRISAT's Sahelian Center in Niger; coarse grain marketing with ICRISAT in Zimbabwe; irrigation investment policies with IRRI; and fertilizer use in the semiarid tropics with ICRISAT in India. Other projects include work with CIAT, ILCA, ICARDA, CIMMYT, and CIP. We look forward to many more valuable collaborative efforts in the months and years ahead.

Concluding Remarks

IFPRI's future is filled with exciting prospects and challenges, including formally and firmly entering the field of research into the long-run sustainability of natural resources for agriculture. The challenge to IFPRI is to contribute effectively, through its research and outreach, to food policy debate and decisionmaking.

So, our future is cut out for us as we continue to tackle an ever expanding research agenda.

I feel greatly challenged by the responsibility of leading IFPRI over the next year or two. I come to IFPRI at a time of redefinition and self-examination. We welcome any guidance you wish to provide with respect to both strategic focus and future priorities of IFPRI. While I've not contributed to IFPRI's past achievements, and in other respects am not wedded to the past, I am committed to IFPRI's future as it goes through exciting changes and crosses new frontiers.

Thank you all for your unwavering support of IFPRI. We shall strive, continuously and strenuously, to earn it, and I trust with increasing success.