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STREET

OFFICE MEMORANDUM

TO: Doris Bomstein

DATE: 16-2-72

FROM: Sol Sanders *LS*

Letter No. 43

SUBJECT: "Some Lessons from World Bank Experiences"

Dear Doris,

Could you send us along a half dozen copies of this paper that Shi Takahashi gave at a Seminar of the Pan American Development Foundation, Santo Domingo, Dominican Republic, September 22, 23, 1971?

Thanks ...

2/22/72
Jenny
2657
 they promised to
 send a dozen; I've
 never seen it.
 I can go into
 pouch; let me
 have one to look
 at please
 & hold others
 if possible
 other dist

*Sent
 by pouch
 2/23*

SOME LESSONS FROM WORLD BANK EXPERIENCES^{1/}

A paper prepared for the Conference at Stanford University on Strategies for Agricultural Development in the Seventies on the occasion of the Fiftieth Anniversary of the Food Research Institute by Shigeharu Takahashi, Adviser, Agriculture Projects Department, International Bank for Reconstruction and Development

^{1/} Substantial portions of this paper were presented to a Seminar of the Pan American Development Foundation on Integral Development at the Community Level, Santo Domingo, Dominican Republic, September 22-23, 1971.

Introduction

1. Postwar development and aid programs show a series of changes in approach--the initial emphasis on capitalizing industrial development and relying mainly on technical assistance and institutional changes in agriculture has now been largely abandoned. Capital goods import programs--so fashionable in the immediate postwar period--have given way to the financing of more integrated projects. Land reforms have been difficult to carry out, particularly since they often adversely affect the interests of those in power. Similarly, taxation has had only a modest impact as a means of redistributing income and wealth since this has not been a priority objective of most governments. Tax policies have usually been directed at obtaining minimal revenue requirements, and tax rates tended to be fixed at low levels consistent with encouraging private savings and investment. Protection for industries not only meant high input prices and low product prices for agriculture, but also far-reaching tax exemptions and subsidies for industry. At the same time, the concentration of resources on a small industrial sector limited domestic market growth for both agricultural and industrial output.

2. On the agricultural front, initial efforts to improve the plight of the low income farmer concentrated on introducing simple improvements in cultivation methods, "improved seed", fertilizer, etc., through mass extension, supervised credit programs, and community development. Much of the earlier efforts looked for technical solutions and did not give adequate attention to the incentives required to bring about change. The technical solutions also often assumed a ready transferability of the temperate zone technology of the developed countries to the tropical conditions of the developing countries. The sharp changes in cereal output and farm productivity brought about by the "Green Revolution" demonstrate the importance of developing technologies appropriate to local conditions, the need for a "package" including capital investments in water resource development, and the importance of incentives. They also illustrate the responsiveness of peasant farmers to market forces.

3. Economic growth has not been the major objective of most development aid in the past. For example, the U.S. and the Inter-American Development Bank in Latin America have directed substantial amounts of their aid to social objectives--housing, education, extension services, agrarian reform, and supervised credit for small farmers. In India and Pakistan, community development programs absorbed a large share of aid resources in the fifties. Food aid and military support accounted for the major share of aid to many countries. In Africa, French and British aid in some respects barely offset the reduction of private capital inflows into newly independent countries. Moreover, we are only just beginning to find some of the ways to change the traditional tribal agriculture of Africa to more productive systems.

4. The Bank Group has really been the only major aid donor concerned primarily with economic growth. However, the resources which the Bank Group

has provided for agricultural development have been minimal until several years ago. Total Bank Group lending for agriculture during the past 24 years has amounted to US\$2.5 billion, but one-half of this has been in the past three years, and three-fourths has been in the past eight years. Thus, the expanded volume of Bank Group investments have not yet matured sufficiently to make a significant impact on agricultural development, employment, income distribution, or poverty. Yet, there are a sufficient number of examples of projects which have contributed to raising productivity of small farmers on the margin of subsistence to show that growth can be consistent with welfare objectives, and is certainly a prerequisite to any widespread diffusion of employment at acceptable levels of income.

5. At this juncture it therefore seems relevant to pause and take stock, to review the experience which the Bank has gained in the rapid expansion of its agricultural lending, to explore the alternatives to developmental lending which emerge from the world of events and ideas as we now find them, and to set forth a strategy for the seventies which reflects all this. Because it is a strategy which embraces a range of approaches to the problems of agricultural development, there may be some value in taking time to elaborate some of the considerations which have gone into a formulation of the strategy.

Rural Employment and Agricultural Development in the Seventies

Dimensions of the Problem, Technology and Scale, and Constraints

6. There will be continuing and increasing pressure on agriculture to absorb most of the rapidly increasing labor force in developing nations. Rising populations have swelled the labor force in developing countries to roughly 600-700 millions, with 15-25 millions added each year--mostly in Asia--but few developing nations have been spared the impact. Industry and other non-agricultural sectors have not provided the wide employment opportunities, which were anticipated from development policies of the past, partly because the employment base in industry is generally small and high capital requirements per job are beyond the reach of most developing nations. Also the capital-intensive technology pursued restricts the employment potential, and alternative labor intensive technology is not readily available. On average, employment in industry increased only half as much as output. The agricultural sector, which accounts for about 70% of employment in the developing world, has had to absorb most of the increases in labor force in the past decade. This has occurred despite heavy rural-urban migration which has aggravated unemployment and living conditions in most cities. Even if industry should begin to pull more weight, the number of persons looking for employment in agriculture will continue to increase substantially in the next decade.

7. In addition to the unemployed, there are substantial numbers already working long hours who are among the rural poor. Since the principal worker is often not productive enough to earn an acceptable level of income, other members of the family also look for work and become part of

the labor force. Hence a sizeable part of the underemployed or unemployed labor force are in fact women and children who, in more developed societies, would be at home or in school. The volume of unemployment and underemployment is therefore at least partly a reflection of the low productivity in existing job opportunities. To the extent that employment is part-time or seasonal, women and children can and do contribute substantially to family incomes in developed as well as developing societies. Family enterprises, which are the dominant form in agriculture and small businesses, can provide a great deal of flexibility in effectively utilizing such supplemental labor resources without unduly upsetting educational needs or household responsibilities.

8. In primitive societies, acceptable levels of income seem to fall not much above the subsistence level. Traditional forms of agriculture--ranging from bush fallow under humid, tropical conditions to nomadic pastoralism under arid and semi-arid conditions--provided a subsistence. However, with improvements in communications, exposure to an ever-increasing range of consumer goods, and the higher incomes possible in urban centers, subsistence is no longer enough. Younger people are increasingly seeking escape from the hard work and low incomes characteristic of traditional systems of agriculture. Strong tribal and family ties give the young access to resources which permit them to migrate to the cities and remain unemployed for substantial periods. These ties also provide a fall-back position in case they cannot find work in the cities. They can usually return to the village or the farm and again share in the drudgery at subsistence levels of income. Indeed, this is what has been happening in much of Africa, Latin America, and Asia where there is still land to be developed, but with relatively low rewards so long as only traditional methods could be employed.

9. Introduction of new technology or capital can improve the picture. The experience in recent years with the high-yielding varieties of rice and wheat clearly shows that adoption of the new technology improves incomes of cultivators substantially, and greatly increases the use of labor per hectare--in the case of wheat by about 25-35% and of rice by about 40-46%. Much of the technology itself is neutral to scale, adoptable by small as well as large cultivators. Where small farms have adopted the new seeds, yields are as good as on large farms--sometimes better if fertilizer applications are about the same, because more labor is applied. The participation rate of adoption, however, is generally much higher among large farms reflecting easier access to inputs of seeds, fertilizers, insecticides and water, the ready availability of credit to finance inputs, the ability to obtain technical information and the resources to withstand the risks of innovations. The innovators, therefore, generally have large farms, more assets, and better education. Without them it would be difficult to spread new technology; but, small farmer participation can also increase as these factors, particularly credit and inputs, are made available. In some districts in the Indian Punjab, there is almost 100% participation among small cultivators.

10. There is also some evidence that the adoption of the new varieties involves more labor use per hectare on small farms than on large. Most recently (1970), a survey of the introduction of IR-8 rice in the Phulpur area in East Pakistan found that small farms (less than 4 acres) using the new rice increased the use of family labor per acre by 20 man-days and of hired labor by 24 days, whereas larger farms showed little change in family labor and an increase of 10 man-days of hired labor.^{1/}

11. It would seem that in the exploitation of the new varieties of wheat and rice, there is no conflict between output and employment, particularly when the development effort is directed toward the smallholder. With more labor needed on their own units, small cultivators have less time for outside work as agricultural laborers, thus reducing the supply of casual agricultural labor. At the same time, small farms utilizing the new technology appear to create as much of a demand for additional hired labor as large farms. No doubt there are even more gains to be had through further intensification. Both labor use and yields from the new varieties of rice are still relatively low compared with Japan, even though the latter has a considerable degree of mechanization. Further, there is still much potential for multiple cropping in Asia since this opportunity has been exploited on less than half the land equipped with irrigation.

12. But the new varieties of rice and wheat alone will not suffice, restricted as they are primarily to areas with adequate rainfall or irrigated areas with some measure of water control. Moreover, at least part of the production gains have come from displacing more labor-intensive crops such as cotton, or nutritionally important pulse and oilseed crops. Large areas and many small cultivators will remain untouched until similar new technology is developed for other crops and livestock appropriate to their environment. In particular, these include rice under rainfed conditions; sorghums and millets for dry areas where people frequently do not have enough to eat; the pulses, an important source of protein for which production has fallen in recent years; labor intensive cash crops such as cotton and other fibers appropriate for smallholdings; additional labor-intensive enterprises such as dairying, small livestock, additional on-farm processing, vegetables, fruits, and specialty crops. There is need for diversification in cropping patterns to even out labor requirements during the year.

13. It is unfortunate that so little is known quantitatively about the supplementary employment creating effects of agricultural development. This relates both to the activities of providing inputs essential to modernized agriculture and to the marketing, processing and transporting of marketable surpluses, which tend to rise much faster than farm production itself. Moreover, the impact goes beyond these immediate manifestations, feeding demand for other activities, such as more ample consumer goods and services, and better education and health facilities.

^{1/} Dr. Irshad Khan, Pakistan Institute of Development Economics, "Modernization of Small Farms", East Pakistan, 1971

14. Many nations are concerned with the overcrowded urban populations, and the continuing flow of rural migrants to cities. They look toward the establishment of growth centers in rural areas to provide employment, and the amenities of life to stem that flow. But it is not easy to establish new industries outside of established centers because of transportation costs related to sources of supply and markets, quality of the labor force, and other factors. Temporary subsidies--including subsidized infrastructure--tendered to encourage establishment have a way of becoming permanent. It would seem that the appropriate way to develop growth centers would be to build on their potential contribution to agricultural development in the area--the establishment of local centers of market and processing facilities both for production inputs and the agricultural commodities produced. Again, the case of Punjab is to the point. A considerable amount of small-scale production of tubewell equipment, including pumpsets, has developed in small rural centers without specified government direction. By and large, much can be expected from spontaneous developments of this nature once some initial impetus is given to agricultural progress.

The Continuing Need for Output Growth

15. Despite the widely publicized success of the "Green Revolution" in some parts of the world, the agricultural problem is still far from being solved--per capita agricultural output in the developing countries remains at the level of the early 1960's. The failure of per capita output to rise is mainly due to population expansion, which is currently estimated at nearly 3% per annum. The comprehensive set of targets of Development Decade II, adopted by the United Nations General Assembly in November 1970, calls for an average annual growth of at least 6% in GNP of developing countries during the 1970's, including a 4% growth rate in agricultural output and an 8% rate in manufacturing output. The resources required for this task will be enormous. Furthermore, the main burden must be borne by the developing countries, whether or not the aid target of a 1% GNP contribution by the rich countries materializes.

16. In addition to their need for economic growth, the developing countries are faced with increasing pressures to improve social conditions through increasing employment opportunities, equalizing income distribution and reducing mass poverty, improving nutrition, decreasing illiteracy, etc. Very few countries are equipped to cope with these multiple public goals, even in terms of basic institutions. Of all the constraints, however, the lack of sufficient resources is by far the most serious.

17. Given the present level of material welfare of the developing countries, economic growth is clearly a necessity. In the short run, there is scope for some trade-offs between growth and other social objectives. But any long-term development strategy which ignores the growth objective is bound to be self-defeating--the ultimate result would be a sharing of poverty rather than greater welfare for all.

18. An economic rationale for an effective employment policy, in the context of a growth objective, is found in the capital-labor factor endowment of the developing countries. Growth policies are not necessarily in direct conflict with employment and distributional objectives. For many of these labor abundant countries, pursuance of a growth policy may in fact mean an exploitation of abundant labor resources. The development histories of Japan, Taiwan, and Korea, illustrate the possibilities for growth based on labor intensive technology. They also illustrate the importance of external market outlets particularly in the period before benefits are spread sufficiently to create a strong domestic market.

19. Increasing employment opportunities in rural areas means growth of agriculture; and, growth of this sector depends to a great extent in providing agricultural investments and inputs (such as surface or tubewell irrigation, opening up new land, farm machinery, fertilizer, pesticides, etc.), as well as credit and technical know-how, which are complementary to both employment and productivity. Thus a direct approach to increasing rural employment involves a major commitment of resources and the development of institutions. In addition, emphasis must be placed on agricultural and economic research programs, with particular emphasis on the technological development of labor intensive activities. This research effort should include some basic studies of the nature of unemployment and poverty in rural communities to develop more effective means of coping with these problems within the broader context of changing family systems and social structures.

20. As most countries make economic progress, the non-agricultural sector gradually becomes the major source of new employment. It is important in the early phases of this process that the groundwork be developed to facilitate the transition; but, there seems to be no real chance for a rapid enough growth in these other sectors to provide the necessary job opportunities as fast as the agriculture sector can release workers.

21. The persistence of deep discontent and frustration among the masses, resulting from extreme disparities of interpersonal and group welfare, are incompatible with the political and social stability of any country in the long run. So long as the ruling classes in the developing countries are content to make only token gestures toward income equalization and employment creation, poverty will persist. Hopefully, a policy directed primarily to economic growth will make it easier for vested interests to accept more effective and progressive tax systems, and provision of basic health and education services.

The Bank's Role

22. The gradual evolution of the activities of the World Bank Group from its initial task of postwar reconstruction in Europe to a broad ranging development agency concerned with major aspects of economic development has involved considerable changes in the sources of funds and criteria

for lending. In the early years the Bank was concerned primarily with establishing its reputation as a bank in order to assure access to capital markets on favorable terms. Lending was primarily for infrastructural investments. Project investments were made in the context of overall development prospects of the particular country--with considerable emphasis on adequate resource mobilization efforts, reasonable fiscal and monetary policies, rational balance of payments management, and adequate debt servicing capacity.

23. The establishment of IFC enabled the Bank Group to act as a catalyst to encourage greater private investment in developing countries, particularly in the industrial field. Subsequently, the establishment of IDA brought in a new dimension--a recognition that countries with difficult balance of payments problems and per capita incomes in the lower range of developing countries could be considered for soft loans provided the development efforts made sense in other respects. The scope of lending was broadened to include education, tourism, population control and water supply and sewage, and much greater emphasis was to be placed on agriculture. Individual projects would, however, continue to be appraised on the same terms--i.e. they must be economically and financially viable, and contribute significantly to economic development.

24. In the course of the first two decades, the Bank Group has developed the philosophy that viable projects should have acceptable rates of economic return, and that revenue-earning projects should generate sufficient revenues to pay off investments and to provide sufficient revenues to finance replacements, and a reasonable share of future expansion. Problems of employment, poverty, and income distribution were considered primarily in relation to the broader assessment of performance at the country level--the rationale being that growth in GNP would in time reduce poverty and make improvements in the distribution of GNP easier with appropriate fiscal measures.

25. As noted earlier, the experience of the past several decades shows that there are some trade-offs between growth and welfare. A strategy which focuses only on growth and leaves large segments of the population near poverty will tend to run into demand constraints which can limit further growth. At the same time focusing on welfare objectives alone will ultimately result in a sharing of poverty rather than greater welfare for all. Attempts to stimulate development through institutional changes in land tenure, extension services, community development and public works programs have had mixed results. Too often inadequate appreciation of the complexity of the development process and the vested interests of the ruling classes have combined to thwart the well-intentioned efforts at reform.

26. In 1964, when the Bank decided to sharply increase its lending for agriculture, it was recognized that the Bank's traditional role of financing infrastructural projects would have to be broadened and expanded, and that active assistance in project identification and preparation would be needed.

27. It was recognized at the time that the low levels of productivity and investment in agriculture prevailing in the less-developed countries could not be remedied merely by providing additional finance. The effective use of capital was impeded by a host of human and institutional problems:

- (a) the diffuse nature of the agricultural economy, typically comprising thousands of unorganized producers;
- (b) the economically precarious character of farm units in many countries which permits of little capital accumulation, provides little security for loans, and often makes adoption of technical innovation seem unacceptably risky to the farmer;
- (c) the generally low level of education in rural districts, their isolation from modernizing influences, and the consequent absence of trained progressive leadership;
- (d) the lack of transport and other facilities needed for efficient marketing of agricultural output;
- (e) the weak incentives for production where output is largely for subsistence, markets are unorganized, and tenancy and tax arrangements are often unfavorable;
- (f) the inadequacy of Government organization and personnel for agricultural work due largely to its low prestige, and particularly the lack of experienced personnel to prepare and execute projects; and
- (g) price controls or other economic measures applied by some governments in a way which discourages efficient production and investment.

28. To cope with these difficult problems, it was recognized that a great deal of flexibility would be needed particularly with regard to the conventional approaches to financing capital projects, defining projects, and financing local currency expenditures. Moreover, the importance of developing intermediary institutions to reach and motivate large numbers of small unorganized producers scattered over large geographic areas made it necessary to provide a considerable amount of technical and managerial assistance along with the financing. Considerable changes were also often needed in government policies relating to the provision of services, pricing, land tenure arrangements, and marketing.

29. Since then the Bank Group has developed a pragmatic, flexible approach to agricultural lending which has resulted in a continuing expansion in the number and kinds of projects. Considerable efforts have been devoted toward developing new ways of reaching larger numbers of small farmers and landless laborers. Yet, as pointed out earlier in the paper, the magnitude of the problems of poverty, employment and income distribution is such that the resources provided so far by the Bank Group have been woefully inadequate in relation to the need. Moreover, even if substantially larger volumes of resources were available, there would be difficulties in identifying, preparing, and implementing projects effectively on the scale required.

30. Although increased efforts to prepare viable projects are being made both by the Bank directly and through the FAO/IBRD Cooperative Program, we still do not know enough about the development process to move boldly on the scale required. In Africa, for example, most projects must be scaled down, at least in the initial phases, until technology is proven, management capacity is developed, and ways of reaching and motivating farmers in the traditional sector are found. Experience to date has been promising in introducing plantation crops such as tea to smallholder developments, with nucleus estates providing technical assistance and processing and marketing facilities, and integrated development projects providing infrastructure, research, extension, credit, and marketing services. Efforts are also being made to bring traditional nomadic herdsmen into the market economy by improving stock routes and providing fattening facilities and upgrading their herds by developing breeding farms to supply improved blood lines. During the past year 9 out of the 10 agricultural projects financed in Africa were entirely for smallholder agriculture, and the other one (Ivory Coast Coconuts and Oil Palm) involved a nucleus estate which would later provide the basis for smallholder production. As we gain further experience and countries develop their implementation capacity, it should become possible to expand the scale and scope of such lending in Africa.

31. Irrigation, drainage and flood control projects will continue to absorb a large share of our lending in agriculture. They are usually in the public sector and benefit all farmers in the area irrigated, drained, or protected. About 70% of the irrigation investments have been in Asia where the vast majority of the beneficiaries have been small farmers. To the extent that the land tenure pattern is skewed in favor of a relatively small number of large units, the bulk of the benefits can go to a small number of farms. However, the principal irrigation investments have been in countries where the large majority of the beneficiaries have been small- and medium-sized farms. In all of these, the concept of a "project" has been broadened to ensure that adequate provisions are being made to ensure availability of basic supporting services and infrastructure, and that the "project" is not limited to the construction aspects alone. A further development, growing out of the sector work described below, is to place irrigation in a broader perspective which accords more careful study of rainfed agriculture opportunities before embarking on new, and frequently quite costly, irrigation investments.

32. Agricultural credit and livestock projects are becoming increasingly important, and are aimed at commercially viable farmers since investments financed must generate sufficient additional income to repay the principal and interest and provide sufficient incentive to make the farmer undertake the investment. Generally this has meant that the very small, submarginal farmers have not been able to participate, although in some cases previous or concurrent investments in irrigation and other elements of improved technology can bring a number of these into the creditworthy category. This has been particularly true in Latin America where USAID and the Inter-American Development Bank have generally provided funds on softer terms for special, socially-oriented credit programs for small farmers. However, in the IBRD Mexican loans, arrangements for financing groups of small farmers through the Bancos Agropecuarios are becoming increasingly important. In Colombia a special credit program was financed for farmers in agrarian reform areas, and in Chile agrarian reform cooperatives are being financed under a Bank financed livestock project.

33. In two Bank-financed irrigation projects in Malaysia, the Bank has also been financing consultants to develop a new approach to financing small rice farmers through cooperatives, farmers associations and private credit centers. The system is based on a centralized computer which issues coupons valid for purchase of inputs and services, and maintains accounts for each farmer and each transaction. The purpose is to reduce costs of lending to large numbers of small farmers, and to build up a credit record for future medium- and long-term lending. In the Philippines the Bank has made two loans to the Central Bank to be channeled to small- and medium-sized farmers through a system of small, privately owned rural banks. In all credit projects, the Bank has aimed at establishing sound credit institutions and encouraged a gradual expansion and broadening of their lending as experience is built up.

34. As a development bank, the focus of Bank/IDA lending has been on financing capital rather than current expenditures. In recent years increasing recognition has been given to the urgent needs of small farmers for short-term agricultural credit and medium-term needs for increased working capital requirements generated by capital investments. Financing of start-up capital for such purposes is not an uncommon feature of recent credit projects. It is highly important, however, that credits under such programs are channeled into productive purposes. This usually calls for building in technical assistance and loan supervision capability features to minimize the risk of simply adding to the farmers indebtedness.

35. In the livestock field a major emphasis has been to encourage beef production based on new technology for low cost beef production using mixed grass legume pastures developed in Australia and New Zealand for tropical and subtropical conditions. Early efforts in Uruguay have shown that the technology is both transferable and profitable. The Bank Group has since financed or is considering projects in most Latin American countries, and has financed several projects in Africa. Beef projects,

particularly breeding projects, involve a relatively extensive use of land--much of it marginal for sustained cropping--and involve economies of scale which preclude direct participation of very small farms except as suppliers of farm labor. The operation of such extensive beef ranches require relatively little labor; but, the development phase involving land clearing, pasture establishment, fencing, and construction of water supplies and stock handling facilities does provide a substantial amount of employment. The strong demand for beef and the extensive areas suitable for development have fostered a rapid increase in this type of project in recent years, and has perhaps contributed to the frequently heard charges that "the Bank favors large farmers and does very little for the small farmer".

36. However, the development of an efficient cattle breeding industry can provide benefits to smallholders in addition to the temporary employment provided during the development phase. Small farmers can benefit from the availability of cheap feeder steers by fattening them on fodder and crop residues produced on their small holdings. They also contract with ranchers to clean and rejuvenate pastures by putting the land through periodic short-term cropping cycles. In Korea and Turkey, development of intensive dairy farming, poultry and pigs represent additional ways of meeting protein needs through small- and medium-sized enterprises.

37. The Bank/IDA has experimented with a number of different approaches designed to modernize traditional rural societies. Some typical examples of projects oriented towards large numbers of small farmers or landless laborers are:

- Lilongwe Project in Malawi - Regional vertically integrated development with heavy technical assistance component.
- Shire Valley Cotton Project in Malawi - Smallholder Cotton
- Wollamo Settlement Project in Ethiopia - Integrated regional smallholder settlement.
- Kenya/Livestock - Group Ranching
- Tanzania/Tobacco - Smallholder Crop Settlement
- Kenya/Tea - Smallholder Tea Development
- Uganda/Tea - Smallholder Tea Development
- Burundi/Coffee - Coffee Rehabilitation for smallholders.
- Ivory Coast - Outgrowers around nucleus estate.

- | | |
|-------------------------|--|
| Ghana/Fisheries | - Boats and equipment for small fishermen. |
| Malaysia/Jengka Project | - Settlement of landless laborers and submarginal farmers. |
| Ceylon Irrigation | - Settlement of school leavers. |

In projects of this type, there is usually a credit element, but generally it is not possible to rely on the credit mechanism alone for proper implementation. Even provision of supporting technical services is usually insufficient, and special organizational arrangements are in most cases called for. The problems are difficult, and the Bank is continuing to explore possibilities for reaching a larger number of farmers. The Caqueta Settlement Project in Colombia is an attempt to develop lower cost methods of opening up new areas, and similar projects are currently under consideration for Northeast Brazil and the Amazon region.

A Strategy for the Seventies

38. What, then, of the future and the Bank's agricultural lending activities? Perhaps one lesson to be gleaned from the past is the realization that the concept of development itself, and the means by which to bring it about, are in a constant state of change over time. The state of ignorance on these matters remains large, and from that fact there follows a number of related activities which constitute a strategy for agricultural lending appropriate to the times and the objectives of that lending:

- (a) The project lending aspect will continue to be based on careful experimentation with new lending approaches, utilizing the kinds of experience described briefly above. To ensure that the experience can be analyzed and used to shape new lending, a built-in data collection element is already beginning to be included in agricultural loans, aimed at eventual evaluation of projects in a broader sense than just the project implementation phase. Because project lending will probably emphasize flexibility in approach, and be designed to meet a broadly integrated set of developmental needs, the distinctions now in effect (e.g., livestock, general agriculture, irrigation) are likely to be less important than in the past. For example, under the general umbrella of "credit" projects, a great many rural activities can be included for financing. Further, the importance will grow of income and employment generating activities in fields related to agriculture, but not necessarily including only direct

agricultural production. In fact, some past Bank lending has provided for building infrastructure for towns as a complement to an agricultural loan (e.g., the Jengka project in Malaysia), and this type of agro-industrial orientation can therefore be expected to expand in the future.

- (b) Project lending in the seventies will become much more an outgrowth of Bank-sponsored sector work being carried out to provide guides to the role which agriculture should play with reference to such things as production (export and domestic use), employment, income distribution, nutrition and migration. From the early days, the Bank has tried to help borrowers to improve their planning, and the Bank's general survey mission reports were an attempt to provide technical assistance in planning in the fifties and early sixties. The Bank's economic missions have also tried to assist countries in their planning, as well as providing the Bank necessary background information needed to assess creditworthiness and to plan its lending operations.

However, the coverage given to specific sectors in such efforts has tended to be broad brush, since such studies at most depended on one or two agricultural specialists visiting the country for relatively short periods. Project missions could go into more depth, but were usually preoccupied with project details. In some cases, however, particularly where the country itself was already engaged in serious planning efforts, it has been possible to relate projects and lending programs to overall development objectives and strategy in a reasonably effective way. But this was more the exception than the rule. As a result, the Bank has begun sector work in a number of countries, leading to studies in some depth on key issues and project possibilities which form the basis for continuing dialogue between the countries and the Bank on the structure and nature of a jointly agreed strategy of investment.

- (c) Related to this is an effort of long standing, being carried out by the Bank's Economic Development Institute, on planning methods and institutions. This research indicates that, on the basis of experience throughout the world, sectoral planning is the best route to effective planning. Since it is clear that no sector work will be of value unless the results are followed up and become part of a government's own future actions, the need to tie the Bank's sector work to assistance for sector planning seems

evident. There seems agreement in principle that such a tie will be arranged, on an experimental basis at first, for some of the countries scheduled for sector work by the Bank in the near future.

- (d) The Bank is also moving to broaden the base of accumulated knowledge by more direct activity in the area of research--both for work on technical production aspects of crops and livestock and on the economic issues. In the case of the former, the Bank, jointly with FAO and UNDP, is sponsoring a Consultative Group of potential donors, including other multinational banks, bilateral agencies, and private foundations to foster and find financing for international research institutes, both those already established and those to be newly started. The Bank has also made a first loan for the specific purpose of setting up a research activity within one country, including technical assistance to get it firmly established; and, it seems likely that the coming decade will see more of this kind of lending as experience accumulates.
- (e) There is also the matter of research on the economic problems of agriculture, and here the Bank is following a path of combining some in-house research capability with research talent in the developing countries to do research of mutual interest, which will be partially funded by the Bank. The problems to be researched will be largely those which arise in the course of the Bank's lending activities, and efforts are already underway to involve the Bank's operating units more actively in formulating researchable ideas to be worked on under this new approach.

39. In summary, the strategy for the seventies is to continue the trend, already established, of seeking imaginative and workable ways to lend for agriculture and related activities. The amount of agricultural lending will probably grow, but it is clear that the Bank alone cannot bring about the desired development of the agriculture sector in borrowing countries. The lending will increasingly be within sets of development strategies worked out in the course of sector studies and consciously built into the planning mechanisms. Moreover, a broadly based research program should also be feeding new insights into the lending operations from a more careful and deliberate effort to understand what happens as a result of Bank lending, from the technical research being sponsored partially by the Bank, and from supplementary economic research done cooperatively with research institutions in borrowing countries. In a world where the intellectual fashions of what is relevant and important for development are as changeable as the length of women's hemlines, an approach such as this seems necessary to provide a rational underpinning for an evolving strategy of lending for agriculture, and most important of all a continuity of purpose.

Speech to the Tenth FAO Regional Conference for Latin America
in Kingston, Jamaica, December 2-14, 1968

Friedgut

Nov. 20, 1968.

Speech by S. Takahashi (Takahashi)

It is quite clear that in any long term development strategy an important role will be played by the agricultural sector; and that attention must be given to improvements in the productivity of farmers. In Latin America, which has, on the average for the region, a very high rate of growth of population, agricultural production has just managed to grow apace with the number of mouths it has to feed. However, as economies grow and incomes rise, the rural sector will be called upon to produce far more food and fibre than at present and this increased effort will require more capital investment - both public and private - and a general improvement of the institutional framework within which farmers and agricultural processing industries now operate. The need for investment and increased productivity is brought home very clearly when one considers that by the end of this century the population of Latin America will have grown by about 400 million over recent levels and will be advancing then at a rate of roughly 100 million every five years.

The World Bank has realized the importance of helping the people of Latin America accomplish their development goals. In the past two years we have lent about \$350 million a year. By 1972 we expect to lend between \$700 and \$800 million a year. In the process of doubling our lending in the next five years, as compared with the past five year period, we intend to quadruple the amount loaned to agri-

culture and increase tenfold the relatively small amount previously spent to help finance education. In total, the Bank has loaned a total of \$325 million for Latin American agriculture, roughly a quarter of all Bank and IDA agricultural financing throughout the developing world. In contrast, in the current fiscal year alone, nine loans or credits totalling about \$135 million are expected to be granted to this region.

Our objective is simple: to assist farmers, both large and small, to increase their production substantially. We will lend for irrigation, fertilizer plants, agricultural extension services, banks to provide farm credit, the improvement of livestock and of seed strains, pesticide production, agricultural machinery and food processing and storage facilities.

IBRD/FAO Cooperative Program

Much of the preparatory work required to bring project proposals to a stage where they became eligible for Bank or IDA financing was carried out by the IBRD/FAO Cooperative Program. Since its creation in 1964, it has conducted well over 300 missions, of which more than 80 were to Latin America. The program either prepared, assisted in preparation or helped in the appraisal of 31 projects which have already been approved for a lending total of \$400 million. Out of a total of 43 agricultural projects approved for Latin America to date, nine were

prepared with the help of the Cooperative Program, and I am sure this ratio will grow in the future.

Future Financing in Agriculture

The environment within which the Bank and FAO will operate in this region for the next several years is in many respects a favorable one. On balance and with few individual exceptions throughout the continent there is not a shortage of land such as exists in many countries in Asia. There are large, fertile, virgin expanses waiting to be exploited, as there are vast untapped water resources which can be harnessed and enable farmers to plant with the knowledge that the crops will not be subject to the fickle vicissitudes of Nature. More than that: introduction of irrigation will allow farmers to plant and harvest more than one crop per year on the same plot, and, with the assured water supply, diversify out of the traditional staples which they were wont to grow for their own subsistence. Gradually, agriculture, with proper guidance and planning, will tend more towards cash crop production and agriculturists towards a market rather than a subsistence economy.

The Agricultural Revolution

In general, throughout the world, prospects are looking up for agriculture.

There is talk of an "Agricultural Revolution", and it is compared with the Industrial Revolution in terms of its possible impact on humanity. The new miracle varieties of wheat and rice which have been developed, improved understanding of plant and pathogen physiology, exciting advances in our knowledge and ability to influence genetic processes as well as the improvement of the methods and materials to supply plant and livestock nutrients while effectively combatting pests and disease, all are phenomena which justify talk of the "Agricultural Revolution". But there can be no technological revolution without a revolution in attitude, and that at least within two groups of decision makers: the first group includes planners and policy makers, the second, farm operators and agricultural entrepreneurs.

I believe it would be valid to assume that within the framework of his knowledge and abilities the farmer does everything in his power to provide the best for himself and his dependents. In general, he wants to improve his family's well-being and is responsive to economic incentives. If he is made literate and provided the institutional framework within which to operate and the guidance necessary, he will increase his productivity, thereby benefitting himself and the economy.

Planning and Development

If this is true, it places the onus on the planners and policy makers to provide the milieu within which the farmer and agricultural entrepreneur will undergo their own personal revolutions. As a first step in providing for this the investment process must be scrutinized and improved. Too often it has been the case that public investment in agriculture has been on a piecemeal basis. The approach has been one of development of individual projects, each of which has looked promising in isolation. And in many cases this approach has improved the well-being of the inhabitants of the project region to some extent - but this is not good enough. If a country is to evoke the maximum response and obtain the maximum benefit from its limited investment funds, the projects undertaken must be conceived within an overall planning framework - of the entire country and of the agricultural sector in its relations with the rest of the economy. Achievement of this goal requires, among other actions, the establishment of sectoral priorities in the short run and, within that context, the establishment of immediate project priorities. In addition, project identification and preparation activities for the medium and longer term should be contemplated in accordance with long term sectoral priorities. Third - where appropriate agricultural policies should be reviewed from time to time to compare

their actual effects with those contemplated at their inception. Where policies are discovered to be ineffective, they should be revised.

We all realize that any plan to develop the agricultural sector must have, as its central axis, the farmer. Unlike most other industries or sectors, on the farm the three major input categories of capital, labor and management are vested in one and the same person - the farmer. He often owns the land he works, supplies most of the labor and supplies the management to transform the first two into a consumable product. Even the smallest farmer and his needs become important when we realize that great increases in production can be obtained from these smallholders without large capital outlays for materials and equipment. The new technology of the Agricultural Revolution is not primarily dependent on economies of scale. Both small and large farmers can benefit; consequently, millions of farms currently existing on the margin of subsistence may now have an opportunity to become viable commercial entities - even if social reorganization, redistribution of land and vast settlement schemes cannot be implemented immediately.

Agricultural Institutions and Services

With man at the center of the Agricultural Revolution and growth of farm production and profits dependent upon the human element, it is up to governments

to provide the farmer and his offspring a level of education and training which will enable them to understand and implement the new techniques. All too rarely will they be organized sufficiently to adopt a uniform approach toward the project opportunities which will affect their well-being. Without sufficient technical and administrative training the agricultural sectors of the developing countries will not be fully prepared to absorb capital on a massive scale. Impressive, prestigious, and beneficial as a multi-million dollar irrigation project most certainly is, all is waste if we do not give the farmer the skills and understanding he needs to reap the full benefit of development aid and make the best of the land on which he lives.

Education, training and extension, however, are only one phase in the development of agricultural institutions and services. Where agricultural policy provides economic incentives and investment and extension provide the farmer with the means and methods for raising production, the demand for fertilizers, pesticides, farm machinery and farm improvement will grow. Facilities for the production, storage, distribution and marketing of inputs will have to be expanded and located strategically to meet the higher demands. Moreover, the change from traditional non-cash inputs to high levels of cash inputs will require the expansion of farm credit. This will entail the use of all available credit channels,

including a much fuller participation of the private sector, both for short-term production and marketing credit and for medium and long-term credit to finance farm improvement.

A method extensively adopted by the Bank has been to channel finance to farmers through credit institutions with the managerial and technical competence, and the autonomy, to act as satisfactory intermediaries. The Bank has so far worked with institutions of this kind in 18 countries - 11 of them in Latin America. In several instances, they were established or have been strengthened with the Bank's assistance. We foresee this as an important part of our work in helping to build up a continuing flow of finance to the agricultural sector. Such credit institutions, along with the suppliers and distributors of farm inputs would also be able to participate in an extension role and disseminate technical information and know-how.

As production of traditional crops and staples expands, there will be need for a thorough reorganization of traditional, inefficient marketing systems. The increased volume of produce will accentuate the need for storage and handling facilities which can prevent the extensive spoilage and losses which now occur between the field and consumers.

Moreover, as more farmers in developing countries throughout the world are exposed to the new technology of the "Agricultural Revolution" and the economies create the proper framework for the efficient operation of institutions and services so that they reap the benefits there is likely to be a reduced need for food aid. Eventually a reversal of present trade patterns will occur. When this happens, production policies may have to shift with a view to transferring resources from the production of food grains into expanded feed grain and livestock production in order to meet a growing demand for protein.

In its search for new fields of lending to agriculture, the Bank has foreseen this trend and has, for example, made loans in Latin America for livestock projects based on new technology for tropical grasses and legumes, improved animal breeds and better management.

This is still not sufficient, however, and the Bank, in cooperation with FAO and other agencies plans to step up its technical assistance activities in the planning, preparation and implementation of projects which will create products aimed at broader and more diversified markets. Such projects could include such diverse items as development of agricultural processing industries and recreational development of marginal agricultural lands for tourism - an industry which is relatively labor intensive and bears great promise in a fast shrinking world where

both leisure time and curiosity are becoming more plentiful each year.

In conclusion, let me summarize by saying that in the Bank we are convinced that lack of capital is not the main factor limiting the development of agriculture. Our experience has convinced us that the current limitations on agricultural expansion consist of a shortage of soundly planned investment projects conceived and set within the framework of a well defined sectoral plan, and a shortage of experienced people to carry out agricultural policies and to prepare and execute such projects.

In an industrial enterprise, success and profit can be assured only when the entire complex from raw material to final consumer is approached and analysed as one system, including location of plant, production, distribution and, where necessary technical assistance to those who have to use the end-product. So must an agricultural project be seen as part of a complete system, with man as the main component in each of its phases. The project must be conceived within the framework of general sectoral pricing policies and production goals, and be complemented by the institutions and services without which its objectives cannot be attained. This may entail the formulation of some smaller, less spectacular projects than many developers and aid-givers like to finance: projects which concentrate on providing the extension, credit and marketing services now so

sadly lacking. This may require that the Bank and FAO, as well as the countries constructing the projects, devote more staff months per million dollars loaned - but this will certainly lead ultimately to a return to the recipient countries of many more millions per staff month than previously have been obtained.

Speech to the Latin American Congress
of Food and Socio-Economic Development,
Sao Paulo, Brazil, December 5, 1969

The recently completed Indicative World Plan for Agricultural Development and the Pearson Commission Report have focussed attention on the importance of agriculture in the development strategy for developing countries. About five years ago the World Bank Group began a determined effort to increase its lending for agriculture. Although the Bank had given attention to agriculture since its earliest days, only around \$600 million had been lent during the first sixteen years representing less than 10% of the Bank lending. During the next six years this had been doubled and during the past fiscal year 1968/69 a total of \$360 million was lent for agriculture. This was more than double the amount lent the previous year and represented about 20% of the year's business. On the basis of projects for agricultural development in various phases of preparation, appraisal and negotiation, we expect during the present year to increase this annual rate by a further 30% and in the years ahead to further expand agricultural lending.

In Latin America, as in the rest of the developing world, agricultural output has barely managed to keep pace with population over the past decade or so. With the pulse of development quickening and population growth unabated, the need for accelerating agricultural development is quite clear. Just to meet the effective demand for food the Indicative World Plan points out the need for increasing the rate of growth of food production from the 2.6 to 2.7% per year of the past decade to a level of 3.9% per year or a 50% increase in the rate of growth. The resource base and available technology make these goals quite possible. However the problems of mobilising these resources and directing them into the most efficient uses involve many difficult problems. Agricultural growth unlike in other sectors depends on the individual decisions of millions of entrepreneurs reacting to market forces and acting in concert to achieve production goals. Government can provide many of the basic infrastructural needs and provide the kind of economic environment needed to encourage agricultural development, but in the final analysis, unless the farmer acts in the right way, development cannot occur.

For many years some people have believed that farmers are illiterate and stupid, that decisions have to be made for him and that development can occur only under a paternalistic system in the guise of plantation management, patron, landlord or in some cases even Government-made decisions. Many of us believed in the innate intelligence of the farmer but had little experience to guide us. However, during the past quarter of century we have had to learn the hard way that farmers will respond to incentives and that they will change their traditional ways if the change is profitable. The rapid

expansion of the areas planted to new high yielding varieties of wheat and rice during the past several years in much of Asia and the Middle East has dramatized the possibilities for rapid change provided the innovation is sufficiently profitable. The importance of technology - the need for applied research - the results of which can be demonstrated to farmers in terms of real profit possibilities, cannot be overemphasized.

However, agricultural development cannot be approached on a piecemeal basis. Too often public investment in agriculture has been on such a basis. The approach has been one of development of individual projects, each of which has looked promising in isolation. In many cases this approach has improved the well-being of the inhabitants of the project region to some extent - but this is not good enough. With scarce resources at their disposal, developing countries must obtain the maximum benefits. Projects undertaken must be conceived within an overall planning framework of the entire country and of the agricultural sector in relation to the rest of the economy. Achievement of this goal requires, among other actions, the establishment of sectoral priorities and the establishment of project priorities. In addition, project identification and preparation activities should be contemplated in accordance with sectoral priorities. Third, agricultural policies should be reviewed from time to time to compare their actual effects with the intended objectives. Where policies are not achieving their purposes they should be changed.

We all realize that any plan to develop the agricultural sector must have, as its central axis, the farmer. Unlike most other industries or sectors, the three major input categories of capital, labor and management on the farm are vested in one and the same person - the farmer. He often owns the lands he works on, supplies most of the labor and supplies the management to produce the final product. Even the smallest farmer and his needs become important when we realize the increases in production which can be obtained from these smallholders. The new technology of the agricultural revolution is not primarily dependent on economies of scale. Both small and large farmers can benefit; consequently, millions of farms currently existing on the margin of subsistence may now have an opportunity to become viable commercial producers - even if major program for social reorganization, redistribution of land or vast settlement schemes cannot be implemented immediately.

Where agricultural policy provides economic incentives for investment and extension provides the farmers with the means and methods for raising production, the demand for fertilizers, pesticides, farm machinery and farm improvement will grow. Facilities for the production, storage, distribution and marketing of inputs will have to be expanded and located strategically to

meet the higher demands. In this connection the important role of the private business community cannot be overstressed. Moreover, the change from traditional farm produced inputs to high levels of cash inputs will require the expansion of farm credit. This will entail the use of all available credit channels, including a much fuller participation of the private sector, both for short-term production and marketing credit and for medium and long-term credit to finance farm improvement.

A method extensively adopted by the Bank has been to channel finance to farmers and related industries through credit institutions with the managerial and technical competence, and the autonomy, to act as satisfactory intermediaries. The Bank has so far worked with institutions of this kind in 18 countries - 11 of them in Latin America. In several instances, they were established or have been strengthened with the Bank's assistance. We foresee this as an important part of our work in helping to build up a continuing flow of finance to the agricultural sector. Such credit institutions, along with the suppliers and distributors of farm inputs, would also be able to participate in an extension role and disseminate technical information and know-how.

As production of traditional crops and staples expands, there will be need for a thorough reorganization of traditional, inefficient marketing systems. The increased volume of produce will accentuate the need for storage and handling facilities which can prevent the extensive spoilage and losses which now occur between the field and consumers. Processing, packaging and sales promotion will become increasingly important in order to develop new uses and markets for the expected increases in agricultural output.

Moreover, as more farmers in developing countries throughout the world are exposed to the new technology of the "Agricultural Revolution", and the economies create the proper framework for the efficient operation of institutions and services so that they reap the benefits, there is likely to be a reduced need for food aid. Eventually a reversal of present trade patterns will occur. Production policies may have to shift with a view to transferring resources from the production of food grains into expanded feed grain and livestock production in order to meet a growing demand for protein.

In its search for new fields of lending to agriculture, the Bank has foreseen this trend and has, for example, made loans in Latin America for livestock projects based on new technology for tropical grasses and legumes, improved animal breeds and better management.

This is still not sufficient, however, and the Bank, in cooperation with FAO and other agencies, plans to step up its technical assistance activities in the planning, preparation and

implementation of projects which will create products aimed at broader and more diversified markets. Such projects could include such diverse items as forestry, fisheries, agricultural processing industries and recreational development of marginal agricultural lands for tourism - an industry which is relatively labor intensive and bears great promise in a fast shrinking world where both leisure time and curiosity are becoming more plentiful each year.

In conclusion, let me say that although in the Bank our business is to provide capital and we intend to do so on a greatly expanded scale, we are convinced that lack of capital is not the main factor limiting the development of agriculture. Our experience has convinced us that the current limitations on agricultural expansion often stem from misdirected government policies which leaves farmers and businessmen with little incentive. Moreover, there is a shortage of soundly planned investment projects conceived and set within the framework of a well defined sectorial plan, and a shortage of experienced people to carry out agricultural policies and to prepare and carry out such projects.

In an industrial enterprise, success and profit can be assured only when the entire complex from raw material to final consumer is approached and analyzed as one system, including location of plant, production, distribution and, where necessary, technical assistance to those who have to use the end-product. So, must an agricultural project be seen as part of a complete system. The project must be conceived within the framework of general sectoral pricing policies and production goals, and be complemented by the institutions and services without which its objectives cannot be attained. The business community must play an increasingly active role in providing low cost inputs for the farmer, and provide the processing and marketing facilities for his products. The Bank Group recognizes this and plans to put increasing emphasis on the development of agriculture and as development progresses, we believe that agro-industries providing needed inputs and processing and marketing will play an increasingly important role.

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