

**ASIAN DEVELOPMENT BANK**

**PPA:PAK 22272**

**PROGRAM PERFORMANCE AUDIT REPORT**

**ON THE**

**AGRICULTURE PROGRAM  
(Loan 1062-PAK[SF])**

**IN**

**PAKISTAN**

**October 2000**

**CURRENCY EQUIVALENTS**  
Currency Unit – Pakistan Rupee (Pre/PRs)

	<b>At Appraisal</b> (June 1990)	<b>At Program Completion</b> (June 1994)	<b>At Operations Evaluation</b> (March 2000)
SDR1.00	= \$1.4308	\$1.4190	\$1.4342
\$1.00	= SDR0.6989	SDR0.7046	SDR0.6973
PRs1.00	= \$0.04565	\$0.032787	\$0.1929
\$1.00	= PRs21.9047	PRs30.50	PRs51.85

**ABBREVIATIONS**

ADB	–	Asian Development Bank
ISF	–	irrigation service fee
MFAL	–	Ministry of Food, Agriculture, and Livestock
MFEP	–	Ministry of Finance and Economic Planning
OEM	–	Operations Evaluation Mission
O&M	–	operation and maintenance
PCR	–	program completion report
PIU	–	produce index unit
SCARP	–	Salinity Control and Reclamation Project
SDR	–	special drawing rights
TA	–	technical assistance
t	–	ton
USAID	–	United States Agency for International Development

**NOTES**

- (i) The fiscal year (FY) of the Government ends on 30 June.
- (ii) In this report, "\$" refers to US dollars.

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**BASIC PROGRAM DATA**  
**Agriculture Program (Loan 1062-PAK[SF])**

**PROGRAM PREPARATION**

TA No.	TA Name	Type	Person-Months	Amount	Approval Date
1438-PAK	Study on Policies for Fertilizer Importation and Marketing	AOTA	20	\$300,000	12 Dec 1990

KEY PROGRAM DATA (\$ million)	As per ADB Loan Documents	Actual
ADB Loan Amount/Utilization	198.4	198.4 <sup>1</sup>

KEY DATES	Expected	Actual
Fact-Finding		16 Feb-8 Mar 1990
Appraisal		25 May-7 Jun 1990
Loan Negotiations		6-9 Nov 1990
Board Approval		11 Dec 1990
Loan Agreement		14 Dec 1990
Loan Effectiveness	14 Mar 1991	18 Dec 1990
First Disbursement	14 Mar 1991	24 Dec 1990
Loan Closing	31 Mar 1993	30 Jun 1994
Program Completion	30 Jun 1993	30 Jun 1994
Months (Effectiveness to Completion)	33.5	42.0

**BORROWER** Islamic Republic of Pakistan

**EXECUTING AGENCY** Ministry of Finance and Economic Planning

MISSION DATA	No. of Missions	Person-Days
Type of Mission		
Fact-Finding	1	80
Follow-Up Fact-Finding	1	24
Appraisal	1	105
Program Administration		
Program Specific Consultation	1	36
Inception	1	13
Review	4	101
Special Loan Administration	1	1
Program Completion	1	81
Follow-On Program Completion	10	10
Operations Evaluation	1	30

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ADB = Asian Development Bank, AOTA = advisory and operational technical assistance, PAK = Islamic Republic of Pakistan, TA = technical assistance.

<sup>1</sup> Released in two tranches and equivalent to SDR139,784,000.

## EXECUTIVE SUMMARY

The Agriculture Program loan was approved by the Asian Development Bank (ADB) in 1990 to support the Pakistan Government's effort to address problems and constraints in the agriculture sector through economic restructuring and structural adjustment. The major objectives of the Program were to increase agricultural production and productivity on a sustainable basis and to raise domestic resources for productive investment in the agriculture sector. The Program supported a structural adjustment and development program, market-oriented policies, and private sector participation in agricultural activities with the public sector providing institutional support. The Program consisted of a series of policy and institutional reforms to improve production, productivity, marketing, and distribution efficiency, as well as to ensure equitable distribution of returns and effective management of the agriculture sector. The scope included (i) progressive adjustment of prices of key agricultural inputs and outputs to reflect real resource cost, (ii) gradual transfer of certain public sector operations to the private sector, and (iii) orientation of public sector investment toward rehabilitation and improvement of existing facilities.

ADB provided a loan of \$200 million equivalent from its Special Funds resources to support the Government program of agriculture sector reforms. The first tranche of \$100 million was released in December 1990 and the second tranche on 17 March 1994. The loan account was closed on 30 June 1994 after a one-year extension. The proceeds of the loan were utilized to cover the foreign exchange cost of eligible imported items for the agriculture sector that were procured from ADB's member countries, and matching equivalent funds in local currency were provided by the Government to carry out the program of sector reforms. The Ministry of Finance and Economic Planning was the Executing Agency and the Ministry of Food, Agriculture, and Livestock the Implementing Agency. The State Bank of Pakistan was given responsibility for the administration and utilization of loan proceeds. The task of monitoring and coordination was delegated to the Economic Affairs and Statistics Division.

The Program constituted the first comprehensive strategy of the Government to address the most pressing problems encountered by the agriculture sector in the late 1980s. It provided the Government with financial resources to address severe budgetary constraints and supported the implementation of a series of policy reforms and strategic adjustments to revitalize the agricultural economy. The reform measures are highly relevant to removing market distortions and leading to market liberalization.

Most of the reforms agreed in the Government's development policy letter were undertaken. However, the reforms carried out were not comprehensive or adequate, and were not effectively implemented. Policy reforms on deregulation of the fertilizer subsector were not completely carried out, although the subsidy on fertilizer import was removed. Private sector participation in fertilizer import and export, marketing, and distribution is gradually increasing, but progress has been hampered by active public sector involvement in fertilizer marketing and distribution. The wheat procurement price was increased but is still significantly below the international market price. The consumer wheat price subsidy was not eliminated. Fruit and vegetable exports were not promoted effectively due to lack of support infrastructure. Reforms to increase the production of edible oils and use of certified, improved seeds were not effectively carried out. Reforms in irrigation efficiency were adopted, but progress has been slow, especially in achieving full cost recovery through irrigation service fees. Improving agricultural output in irrigated areas is dependent on delivery to most farmers of a package of farm practices focused on improved onfarm water management but this has yet to be realized. Cost recovery

of irrigation has increased but is still inadequate; the provincial governments are continuing their efforts to achieve full cost recovery.

The Agriculture Wealth Tax Act was enacted in 1994 with an associated increase in the agriculture land produce index that would enhance agriculture sector tax collection. This has created awareness in rural areas on paying taxes on farm revenues. However, the Program paid little attention to the institutional capacity to collect tax, and the amount of tax revenue collected is significantly below that envisaged.

Public expenditure in the agriculture sector declined substantially during the loan period. Agricultural institutions remain weak with low levels of budget support, and the scope of these institutions to provide basic services such as research, extension, and regulatory functions have been impaired.

The Program objectives were too broad, covering a number of issues. Each of these issues is complex and the proposed changes have ramification for the entire economy. There was an absence of detailed policy studies showing the likely impacts of the proposed changes. For example, the removal of the fertilizer subsidy without a full increase in the crop procurement price to market price resulted in higher fertilizer costs incurred by the farmers. The savings in fertilizer subsidy have been nullified by the increased expenditure in subsidy to urea manufacturers and public sector fertilizer agencies.

The policy and development agenda of the Program lacked priorities and performance indicators, and the implementation arrangements did not provide for good coordination and cooperation among stakeholders and the concerned institutions, including Government line agencies. This severely limits opportunities to monitor progress, identify needed adjustments in the sector program, and conduct an effective policy dialogue between the Government and ADB. The implementation of policy reform has not been effective.

The agriculture sector has been performing below expectation for the last two decades and it now appears to be stagnating. The sector grew at an average annual rate of about 3 percent from 1950 to 1997. In recent years (FY1997-FY1999), the average rate of annual agricultural output has been less than 1 percent. Despite achievements such as the removal of fertilizer subsidies and an increase in private sector participation in the import and export of agricultural commodities, many market distortions remain, including low procurement prices for wheat and oilseeds, high consumer price subsidies for wheat and other commodities, and a significant involvement of public sector agencies in fertilizer marketing and distribution.

The absence of clear targets in the Program has left both ADB and the Government with a false sense of achievement in instituting reform. The impacts of the reforms have not been examined in detail. The emphasis has been on compliance with loan covenants. Overall, the impact of the policy reforms is not significant. The Program has yet to achieve the ultimate objective of promoting a free market for agricultural inputs and outputs. Thus, Program efficacy has been less than satisfactory.

The Government lacked the commitment to adopt strategies and consistent policies in implementing the Program. It was reluctant to effectively implement politically sensitive reforms, such as the collection of agricultural wealth tax and removal of consumer price subsidies on wheat and other commodities. Little support was provided for rural infrastructure facilities, extension and research, and development. Program sustainability is less likely if the present situation of weak commitment and inadequate funding continues.

The Program was overly ambitious in pushing for a wide range of reforms without considering the institutional capability and the preconditions for effective reform measures. The Program contained too many reform measures and each of them was treated too broadly to be effective in bringing about meaningful changes. The sequencing of the reforms was poorly thought through. There was an absence of clear targets to be achieved within a time-bound policy framework. However, the Program demonstrated the value of, and benefits arising from, close cooperation between the Government and ADB in designing and implementing important sector programs. Although many reform measures were inadequately carried out, there is now a basis for further strengthening the reforms with strong Government commitment. In view of the many constraints in implementation, weaknesses in program design and the mixed results, the Program is rated less than successful.

Future policy reforms to be pursued by ADB should be specific, prioritized, and focused on a few specific and relevant issues pertaining to ADB's strategic objectives in the country. The central thrust of any future program should be on a greater reliance on market forces and reforms that aim to correct distortions, such as the removal of subsidies and increase in agriculture operational efficiency. An important lesson is that implementing a program in a highly traditional society (with politically well-connected landholders and vested interest groups) and in a country with poor governance, requires a step-by-step approach and a long-term commitment. It would be better to disburse the loan over a longer period of 5-10 years, with the disbursement conditional on introducing and implementing reforms that would lead to market liberalization. If such an approach had been followed, a constituency of support could have evolved, reflecting civil participation in the process. It would also have encouraged ongoing policy dialogue, and facilitated adjusting the policy matrix to gain better sequencing of the reform measures.

Reform measures that have significant political and social implications need to be carefully assessed and analyzed to determine the Government's commitment, institutional capability, good governance, and strong political will to implement such measures. It is futile to include such reform measures in the Program if the Government is weak and does not have the capability to implement the proposed measures.

## **I. BACKGROUND**

### **A. Rationale**

1. In 1988, the Government of Pakistan adopted a medium-term economic adjustment program to reduce the role of the public sector in agriculture and encourage the private sector to assume greater responsibility in promoting agricultural development. The public sector role was to be confined to the formulation of policy and the provision of basic institutional and infrastructural support. The key thrust of this program was to adopt market-oriented policies and encourage private sector participation in agricultural activities. Government policy would support the private sector by ensuring the availability of major inputs such as seeds, fertilizer, and water; providing incentives to produce crops that save foreign exchange, such as wheat and oilseed; and encouraging the expansion of new exports such as fruits and vegetables. A reduction in Government subsidies and an expanded revenue base would generate resources for investments in the physical and social infrastructure necessary for continued growth in the agriculture sector. The increased role of the private sector would enhance the efficiency of the economy and create new jobs. This program was in line with the strategic objectives that the Asian Development Bank (ADB) had in Pakistan and formed the basis of the Agriculture Program loan.

### **B. Formulation**

2. In October 1988, the Government asked ADB to support the medium-term economic adjustment program. The following year ADB conducted an agriculture sector review to update its lending strategy for Pakistan. Following a policy dialogue between ADB and the Government, the Appraisal Mission visited Pakistan from 25 May to 7 June 1990 to assess the appropriateness and adequacy of the Government's proposal as a basis for ADB's assistance to the agriculture sector. The Mission reached an understanding with the Government on major aspects of the sector program, and the terms and conditions of the loan. A development policy letter was signed in April 1990 outlining the Government's proposal for a structural adjustment and development program for the agriculture sector. The Program consisted of a series of policy and institutional reforms to (i) improve production, productivity, marketing, and distribution efficiency; and (ii) ensure an equitable distribution of returns and the effective management of the agriculture sector.

3. In processing the Program loan, ADB consulted with other aid agencies such as the World Bank and the United States Agency for International Development (USAID) to promote consistency in program considerations, covenants, and conditionalities. Coordination with these agencies was particularly close with respect to the identification and formulation of needed sector reforms. The Program complemented the World Bank's agriculture sector adjustment loan and USAID's agricultural sector support program.

### **C. Objectives and Scope at Appraisal**

4. The major objectives of the Program were to increase agricultural production and productivity in Pakistan on a sustainable basis, and to raise domestic resources for productive investment in the agriculture sector through the implementation of appropriate policy reforms. The Program focused on (i) improving the availability of major agricultural inputs through increased private sector participation, (ii) ensuring that private sector investment focused on programs and projects that had a major impact on productivity and production, and (iii) providing production

incentives for selected crops. The Program emphasized on (i) expanding the base for direct taxation of agricultural income; (ii) eliminating subsidies on major agricultural inputs, particularly fertilizer and irrigation; and (iii) eliminating consumer subsidies on selected agricultural commodities. The goal was to move toward market-based pricing of agricultural inputs and outputs.

5. Specific measures to be implemented under the Program included (i) eliminating subsidies on fertilizer imports and encouraging the private sector to assume a major role in fertilizer import and marketing, (ii) encouraging private sector participation in the production and marketing of improved seeds, (iii) ensuring that waterlogging and salinity control be accorded high priority, (iv) raising the procurement prices of major farm produce to bring them in line with border prices, (v) increasing the production of nontraditional oilseeds by providing farmers with higher prices to reduce the import of edible oils, (vi) adopting export-oriented policies and strengthening the role of the private sector in the federal and provincial fruit and vegetable boards, (vii) increasing Government revenue from the agriculture sector by removing tax exemptions on income from agriculture and agriculture-related businesses, (viii) improving the assessment and collection of irrigation service fees (ISF) to ensure full recovery of operation and maintenance (O&M) expenditures, (ix) eliminating wheat consumer subsidies and encouraging the public sector to play a greater role in the transport of wheat and flour, and (x) increasing public and private sector investments in agriculture.

#### **D. Financing Arrangement**

6. On 11 December 1990, ADB approved a loan for SDR139.784 million (\$200 million equivalent) from its Special Funds resources to support the Government's program. The following day, ADB approved a technical assistance (TA) amounting to \$300,000 for a study of policies for deregulation of fertilizer import and marketing.<sup>1</sup> The loan became effective on 18 December 1990.

7. Counterpart funds generated from the loan proceeds were to be used to finance the local currency costs of ongoing ADB-funded and other development projects, particularly in rural areas. The proceeds were used to cover the foreign exchange cost of eligible imported items for the agriculture sector that were sourced from ADB's member countries.

#### **E. Program Completion**

8. The loan was closed in June 1994. A program completion report (PCR) prepared by ADB's Agriculture and Social Sectors Department (West) dated 3 May 1996, discussed the depth, scope, implementation, and operational aspects of the Program. The PCR considered the Program as partly successful. Although there were successes and shortcomings in the various policy reforms pursued, it was concluded that the positive impact outweighed the negative impact. The PCR commented that the complete deregulation of the fertilizer and edible oil industries, the reduction in fertilizer subsidies, and the removal of the wealth tax exemption on agricultural land were among the major achievements of the Program. Progress on irrigation cost recovery and the removal of support price/consumer subsidy for wheat and other agricultural commodities was disappointing.

9. The PCR was a fair judgment of the achievement of various policy measures, and particularly the removal of the fertilizer subsidy and market price liberalization. After accepting the

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<sup>1</sup> TA 1438-PAK: *Study on Policies for Fertilizer Importation and Marketing*, for \$300,000, approved on 12 December 1990.

recommendations of TA 1438 (footnote 1) to completely deregulate the fertilizer industry, including the removal of subsidies (para. 13), the Government resorted to an interim one-time subsidy in October 1995 because of the high price of fertilizer in the international market. Although the interim subsidy was only \$4.8 million, compared with \$47.08 million prior to the Program (Appendix 1, Table A1.1), the PCR noted that this was not in conformity with the policies supported by the Program and could create an undesirable precedent. The PCR recommended that such subsidies should be discontinued.

10. Overall, the PCR provided good evaluative analysis of the progress and achievement of various reform measures at the time of program completion. The partly successful rating of the PCR is supported with a balanced evaluation of the positive and negative aspects of the reforms introduced under the Program. However, the PCR did not discuss the relevance and adequacy of the reforms, and the analysis is not detailed enough to judge the effectiveness and impact of the measures.

## **F. Operations Evaluation**

11. This program performance audit report focuses on the policy reforms that formed part of the Program and presents the findings of the Operations Evaluation Mission (OEM) that visited the country from 27 February to 16 March 2000. The report also presents an assessment of the Program's effectiveness in achieving its objectives, generating benefits, and ensuring the sustainability of the reform measures. It examines the relevance of the Program's policy initiatives, and the effectiveness of the policy reforms carried out during program implementation. It is based on (i) a review of the PCR and loan documents; (ii) materials in ADB files; and (iii) discussions with ADB staff, the officials of the Ministry of Finance and Economic Planning (MFEP) and other Government agencies, and representatives of aid agencies, research organizations, the private sector, nongovernment organizations, and farmers groups.

## **II. IMPLEMENTATION PERFORMANCE**

### **A. Policy Reforms and Institutional Development**

#### **1. Removal of Fertilizer Subsidies**

12. The Program policy conditions for the complete removal of fertilizer subsidy have been complied with. There was, however, a three-year delay in the complete removal of the fertilizer subsidy, achieved in mid-1995 instead of mid-1992. This delay was due mainly to the sharp increase in imported fertilizer prices brought about by the devaluation of the Pakistan currency in FY1993. In that year, the Government provided a subsidy of about PRs810 million, about one third of the average annual fertilizer subsidy incurred in the late 1980s (Appendix 1, Table A1.1).

13. Government expenditure on the fertilizer subsidy declined from about PRs2.4 billion in FY1989 to about PRs50 million in FY1996 and this subsidy was terminated after FY1996. This elimination of fertilizer subsidy was a successful aspect of the Program. Following the reduction and eventual removal of the subsidies and the increase in the retail prices of fertilizers, total fertilizer consumption has remained relatively stagnant from 1996 to 1999 (Appendix 1, Tables A1.2 and A1.3).

14. Together with the removal of the fertilizer subsidy, the Government was to have deregulated fertilizer import and distribution. In FY1999, the private sector accounted for about 56 percent of imports and 69 percent of total distribution (Appendix 1, Table A1.4). The private sector's participation in marketing and distribution was slow but gradually increased over the Program period. However, the Government still provides active support to public sector agencies such as the Fertilizer Import Department, National Fertilizer Development Corporation, and National Fertilizer Marketing Limited. This hampers private sector participation in the sector.

15. After the removal of the fertilizer subsidy in 1995, the Government provided a significant incentive package to urea manufacturers in 1989. The package included (i) a tax holiday for a limited period, (ii) an assured supply of subsidized gas for feedstock at about 10 percent the price charged for fuel generation, (iii) import tax reduction of 10 to 35 percent for machinery and raw materials, (iv) guaranteed minimum price of \$250 per metric ton (t) for locally produced phosphate fertilizer, and (v) the assurance of a deregulated fertilizer market.

16. With these incentives and the protected local market, fertilizer companies have been able to enjoy high profit margins in the production and marketing of urea. It is estimated that the gas subsidy to urea manufacturers is equivalent to a subsidy of about PRs1,800 per t of locally produced urea. With a national annual production of 4 million t of urea, this would place the total subsidy for this industry at about PRs7.2 billion a year, more than three times the amount spent on fertilizer subsidy in FY1991. This has made the removal of the fertilizer subsidy an insignificant measure.

## **2. Increasing Cost Recovery of Irrigation O&M**

17. Irrigated agriculture accounts for about 90 percent of total agricultural outputs in Pakistan. Poor O&M is a major reason for the low irrigation efficiency in the country. A number of steps were taken by the provincial irrigation departments to achieve full cost recovery of irrigation O&M. These steps included (i) increasing ISFs, (ii) streamlining the assessment and collection system, and levying a surcharge on defaulters, (iii) transferring responsibility for ISF assessment to the Irrigation Department, and (iv) establishing a coordinating committee to improve the interaction between the irrigation department and the board of revenue.

18. In line with the large increases in capital expenditure on irrigation schemes and the expansion of irrigated areas, there has been a corresponding increase in the O&M cost. This cost increased steadily from PRs3.4 billion in FY1991 to about PRs7.5 billion in FY1998 (Appendix 2, Table A2.1). However, ISF collected over this period, expressed as a percentage of total O&M cost, declined from 39 percent in FY1991 to 24 percent in FY1999. The O&M cost recovery effort by the Government is inadequate and there is a lack of political will to implement reform measures. At present, water charges are kept at a nominal level and act as a tax to provide general revenue to the provincial government.<sup>2</sup> Due to a large bureaucracy and institutional structure, a large part of the regular O&M cost has been incurred on the payment of administrative staff salaries that have little relevance to irrigation O&M.

19. The OEM found that the maintenance of the irrigation system needs substantial improvement, and the uncertainty and scarcity of water diminished the capacity and willingness of farmers to pay for this water. It is estimated that there is a 30 percent gap between maintenance

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<sup>2</sup> Mellor, J. W. 1996. *Accelerating Agricultural Growth—Is Institutional Reform in Irrigation Necessary?* Pakistan Institute of Development Economics, Islamabad.

needs and actual maintenance collection in Punjab.<sup>3</sup> The current water rates would have to be raised by 500 percent to provide sufficient funds for O&M. The Government is currently exploring the possibility of forming water users groups to undertake the irrigation O&M for each individual scheme.

### **3. Encouraging Private Sector Participation in Seed Supply**

20. The Program's policy reform of encouraging private sector participation in seed production and distribution has been partially successful. Currently, about two thirds of the total certified seeds are distributed by the private sector. However, virtually all the certified seeds distributed by the private sector are imported seeds. Due to low demand for certified seeds, the private sector prefers to import their certified seeds instead of establishing their own seed farms in the country. These imported seeds cost 20 to 50 percent more than locally produced certified seeds. Another problem with using imported seeds is the possibility that these seeds carry diseases from their country of origin. The use of imported cotton seeds is widely believed to be the source of the cotton virus outbreak in Pakistan in 1992-1993. The country does not have sufficient facilities to test the quality of imported seeds. Hence, it is incapable of monitoring all the imported seeds.

21. Despite the Government allowing greater private sector participation in seed distribution, the use of certified seeds in Pakistan has not increased substantially. At about 60,000 to 70,000 t per annum (Appendix 2, Tables A2.2 and A2.3), farmers' use of certified seeds is low. The national figure for all crops is 12.3 percent of all seeds used. From 1990 to 1998, the amount of certified seeds have only increased by 18 percent. Thus, progress has been extremely slow.

### **4. Reducing Crop Area Affected by Waterlogging and Salinity**

22. The Program required the Government to allocate additional funds to provinces to ensure the timely completion of land reclamation projects in affected areas. Waterlogging and salinity control measures include drainage and land reclamation programs, remodeling canals, selective lining of canals and watercourses, and providing surface and subsurface drainage infrastructure.<sup>4</sup> Such measures were introduced in 1959 when the first Salinity Control and Reclamation Project (SCARP) was implemented. Most tubewells developed by SCARP were supposed to be turned over to the farmers in the 1990s but progress was slow because high maintenance costs dampened farmers' interest. Most of the more worn out tubewells were abandoned. The rising water table in areas with saline groundwater has become a major issue, except in limited areas where SCARP-installed tubewells are still in operation.

23. Data on the area affected by waterlogging and salinity is scanty. The waterlogged area varies considerably from year to year. The last survey of land affected by salinity was conducted in 1979. There was no land survey during the program period and there were no specific projects for waterlogging and salinity control. Control measures were usually undertaken as part of specific irrigation, drainage, or land reclamation projects. Government expenditure on waterlogging and salinity control is not known and the cost data reported in the PCR, which showed a doubling of

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<sup>3</sup> Agricultural Consulting Engineers. 1990. *Nationwide Study for Improving Procedures for Assessment and Collection of Water Charges and Drainage Cess*. Islamabad.

<sup>4</sup> The subsurface infrastructure comprises two types of drainage systems, i.e., vertical drainage using tubewells, and horizontal or "tile" drainage using a network of horizontal perforated pipes provided with a pump station at the outlet where gravity operation is impossible.

Government expenditure from FY1991 to FY1995, is misleading since it covers all schemes where waterlogging and salinity control form part of the overall project cost.

24. Information obtained from various publications and field interviews<sup>5</sup> indicates that there has been little change in the area affected by waterlogging and salinity over the last 10 years. Currently, about 17 percent of the cropped area is affected by waterlogging, which in turn affects yield and production. About 12 percent of the existing cultivated land is saline, while another 3.4 million hectares (equivalent to 15 percent of the cultivated land) of saline soils are left uncultivated. Government efforts have succeeded only in arresting further increases in land degradation.

## **5. Raising the Procurement Price of Wheat**

25. The terms of the loan encouraged the Government to raise the procurement price of wheat with the objective of bringing local prices in line with world market prices and providing wheat growers with a price incentive. The loan also required the Government to raise the wheat issue price to eliminate the Government subsidy on wheat storage and distribution.

26. The Government raised the wheat procurement price in nominal terms but not in real terms. Wheat prices were raised marginally each year taking into consideration the production costs, import parity prices, domestic demand, production, etc. During the last decade, the nominal support price for wheat was raised from PRs2.8/kilogram in FY1991 to PRs6.0/kilogram in FY1999, but in real terms, the farmgate price<sup>6</sup> for this commodity changed little. Thus, the Government wheat procurement policy has not raised farmgate prices to the economic parity price level.<sup>7</sup> The farmgate price for wheat has remained at about 70 to 80 percent of the economic price over the past decade (Appendix 3, Tables A3.1 and A3.3).

## **6. Increasing the Production of Nontraditional Oilseeds**

27. The Program required the Government to raise the support prices for oilseed crops more than for wheat to encourage wheat farmers to switch to growing oilseed crops to reduce the country's dependence on the import of edible oils. The Program also called for a review of the ban on the export of edible oil products, and the existing quota system for distributing soybean oil to public and private sector mills.

28. In 1990, the country produced about 25 percent of its total edible oil requirements (Appendix 3, Table A3.4). About 60 percent of the edible oil produced in Pakistan was derived from cottonseed, which is a by-product of the cotton industry.<sup>8</sup> Despite raising domestic prices to comparable international prices by imposing high import duties on edible oil, local production was only able to meet about 28 percent of the total requirements in 1999.

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<sup>5</sup> Interviews with Dr. Muhammad Nawaz Bhutta, Director General of International Waterlogging and Salinity Research Institute, Lahore, and other scientists.

<sup>6</sup> The farmgate price is the price the farmer receives for produce at the boundary of the farm without any transport cost to a market or other marketing services.

<sup>7</sup> The economic parity price of wheat represents the price of this commodity if the market is completely deregulated and imports are allowed.

<sup>8</sup> The appraisal report stated that oilseeds in Pakistan have a higher output/input ratio than wheat, and concluded that Pakistan has a comparative advantage in growing these crops. The OEM is not convinced that this is the appropriate methodology for determining the country's comparative advantage in growing a particular crop.

29. Although nominal support prices for various edible oils have been raised from FY1991 to FY1999 (Appendix 3, Table A3.2), these increases have been very similar to the percentage increase in wheat price over this period. Thus, there has been little change in the relative prices of wheat and edible oil crops, providing no incentive for farmers to switch to edible oil crops. It is imperative that the prices of nontraditional oilseeds be increased further to provide a greater comparative advantage over wheat.

30. The Government complied with the loan covenant on ending (i) the ban on the export of edible oil products, and (ii) the quota system for soybean oil imports. The quota system for soybean imports has, however, been replaced with tariffs on imports of all edible oilseeds and oils. More incentives are needed to encourage investment in edible oil production, given the fact that the population increase has created a higher demand for edible oils and a greater need for oil imports.

## **7. Promoting Exports of Fruits and Vegetables**

31. The Program was vague on the specific measures needed to promote exports of fruits and vegetables. The measures initiated by the Government included the setting up of an agribusiness cell within the Ministry of Food, Agriculture, and Livestock (MFAL) in 1991 with assistance from USAID. However, the agribusiness cell activity was terminated after USAID stopped funding it in 1993. Although a good foundation was laid under the agribusiness cell program to promote fruit and vegetable export, the Government did little to carry on the work.

32. Over the last decade, exports of fruits have increased by about 300 percent in value and 60 percent in volume (Appendix 3, Tables A3.5, A3.6, and A3.7). However, the percentage of total fruits produced that is exported has remained relatively stable at about 3.5 percent over this 10-year period. The volume of vegetable exports has remained relatively constant at about 50,000 t annually over the decade.

## **8. Increasing Agricultural Taxes**

33. The Program's reform measures were designed to (i) increase the collection of wealth tax by removing the exemption for landowners whose sole income was from agriculture, (ii) increasing the produce index unit (PIU)<sup>9</sup> on land for taxation purposes, and (iii) increasing *Ushr* collection through appropriate amendments to the *Zakat* and *Ushr* ordinance.<sup>10</sup>

34. Removing the exemption from agricultural wealth tax was a difficult task, but the Government was able to finally pass the provision as an amendment to the Wealth Tax Act in February 1994. However, the legislation that revised the exemption from wealth tax for agricultural land contained concessions that hampered effective revenue collection. The legislation exempts almost all assets attached to the land or assets used for agricultural purposes from the computation of wealth for tax purposes. Furthermore, agricultural wealth of PRs1 million is exempt from tax if the wealth tax is paid on nonagricultural assets. These concessions ensure that wealth tax is payable on a very small percentage of agricultural land. Associated with the wealth tax, the Government successively increased the value of the PIU. Since the wealth tax act amendment, the

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<sup>9</sup> The PIU is a measure used to value land based on its productive capacity.

<sup>10</sup> *Ushr* is a levy payable by Sunni Muslim landholders based on the gross value of the output of their land. The assessment, collection, and distribution of *Ushr* were done by the local *Zakat* and *Ushr* committees prior to the implementation of the Program.

assessed value of agricultural land has been raised from PRs10/PIU in 1994 to current PRs400/PIU.

35. Currently, only about 1,900 farmers pay agricultural wealth tax. For this year, the Government plans to raise the exemption level from the current level of PRs1 million to PRs2.5 million. With this rise in exemption level, even fewer farmers will have to pay the tax. One major difficulty the Government faces in collecting agricultural tax is that it has very few collecting offices in rural areas.

36. The Program expected that the increase in Ushr collection would have a positive impact on poverty reduction since more funds would be available for redistribution to the poor (footnote 10). The principal amendments to the Zakat and Ushr ordinance were made in 1990 to allow the provincial land revenue authorities to assist in the assessment and collection of Ushr levies. Further amendments were introduced in 1994 and 1995 to streamline the collection process. Ushr collection, however, declined from PRs143.5 million in FY1990 to PRs100 million in FY1995. In FY1999, the National Zakat Foundation had only PRs28 million available for poverty reduction projects. Ushr and Zakat collection is ineffective and there is a need for the Government to further streamline the collection process if any impact on poverty is to be achieved.

## **9. Eliminating Consumer Subsidies**

37. Consumer subsidies, particularly on wheat, flour, sugar, and edible oil, have been a major part of the Government budget expenditure. Wheat import prices are normally higher than the local issue price. Wheat is imported at a higher price but sold at the same price as the local produce with the Government subsidizing the difference. The Program required the Government to raise the issue price of wheat to the same level as the import price so that the subsidy could be eliminated.

38. The Government argues that farmgate prices must be maintained at a lower level in order to ensure low wheat prices for consumers, i.e., providing consumers with a subsidy. The issue price received by the procurers is 20 to 30 percent higher than the price they pay to farmers. In addition, wheat millers are allowed a large margin, about three times their actual cost, for transport, milling, and distribution (Appendix 3, Table A3.8). Thus, the main beneficiary of this policy are the agencies involved in wheat procurement and marketing rather than the consumers.

39. Subsidies on farm outputs (wheat, sugar, edible oil, and cotton) increased from about PRs6.6 billion in FY1991 to about PRs12.2 billion in FY1998 (Appendix 3, Table A3.9). The large increase in this subsidy is for wheat, which accounted for over 90 percent of the total subsidy on farm output. About two thirds of the cost of wheat subsidy is borne by the provincial governments (Appendix 3, Tables A3.8 and A3.9). Thus, the Program did not achieve its objective of eliminating consumer subsidies.

## **10. Increasing Investment in Agriculture**

40. The Government was expected to finalize a long-term core investment program for the agriculture sector together with a water sector investment plan. This investment plan would require the Government to place a higher priority on agricultural development and initiate programs aimed at raising agricultural productivity and farm incomes.

41. Contrary to the expectation that the Government would increase investment and operating expenditure in the agriculture sector (Appendix 4, Table A4.1), public sector agricultural investments declined from PRs17.3 billion in the Sixth Plan (FY1984-FY1988) to PRs5.7 billion in

the Eighth Plan (FY1994-FY1998). Agriculture's share of the total expenditure declined from 7.2 percent in the Sixth Plan to about 1 percent in the Eighth Plan. The annual operating budget for agriculture has been reduced from PRs3,042 million in FY1991 to only PRs431 million in FY1999, i.e., from 3.4 to 0.3 percent of the national budget (Appendix 4, Table A4.2). Thus, the annual expenditure (both capital and operating) for agriculture has decreased five-fold over the last 10 years.

42. Investments in irrigation increased substantially with both capital and annual operating costs doubling over the last 10 years. However, the share of irrigation investments in the total budget remained unchanged over this period at about 10 percent. The largest component of Government expenditure has gone to power, fuel, transport, and communication. This component's share of the capital expenditure increased from 53 percent in the Sixth Plan to 73 percent in the Eighth Plan, while its share in the annual development expenditure increased from 50 to 66 percent from FY1991 to FY1999 (Appendix 4, Tables A4.1 and A4.2).

43. The sharp cutback in Government spending on the agriculture sector significantly weakened the supporting activities of all agricultural institutions and subsequently slowed the rate of agricultural growth. For example, the operating budget for the Agriculture Research Council remained unchanged from 1994 to 1998, while its development budget decreased four fold. Appendix 4, Table A4.3 shows that the annual growth rate of the agriculture sector declined to less than 1 percent from FY1997 to FY1999.

## **B. Procurement and Disbursement**

44. The loan was released in two tranches. The first tranche of \$100 million was released on 19 December 1990 to cover the reimbursement of expenditures incurred 120 days prior to loan effectiveness amounting to \$31.59 million. The balance was used to cover expenditures incurred after loan effectiveness. Full liquidation of the first tranche was completed in May 1992. The second tranche was released in March 1994. The loan account was closed on 30 June 1994, after a one-year extension. The foreign exchange proceeds of the loans were fully used in compliance with the list of eligible items in the Loan Agreement. The major items procured and their share of the loan were (i) fertilizer (65.1 percent); (ii) insecticide, herbicide, and fungicide (23.1 percent); (iii) vehicles and transport equipment (7.3 percent); (iv) rubber (2.8 percent); (v) jute (0.6 percent); and (vi) machinery (0.6 percent). All these items were sourced from member countries. The Government fulfilled the loan condition that 65 percent of the loan proceeds must be used to buy fertilizer.

## **C. Organization and Management**

45. The MFEP was the Program's Executing Agency. It delegated its responsibilities for administration and utilization of loan proceeds to the State Bank of Pakistan and MFAL. The task of monitoring and coordination was delegated to MFEP's Economic Affairs and Statistics Division. MFEP satisfactorily performed the tasks pertaining to the financial aspects of loan management. However, it was not involved in implementing the major policy reforms and did not participate in formulating the reform package. It also failed to ensure compliance by Government agencies concerned. The provincial governments were responsible for implementing reforms designed to increase the efficiency of irrigated agriculture such as ensuring effective irrigation water delivery and full cost recovery of irrigation O&M.

#### **D. Effectiveness of Technical Assistance**

46. The TA study (footnote 1) essentially supported the program recommendations for the removal of fertilizer subsidy, and the complete deregulation and privatization of fertilizer imports and distribution. This was a comprehensive study that set out the steps that the Government should take to move to a completely deregulated fertilizer market. Key recommendations included (i) termination of subsidies to Government agencies involved in fertilizer imports and distribution; (ii) increased extension activities by both the public and private sectors to promote the use of balanced fertilizer by all farmers; (iii) termination of fertilizer price fixing and subsidies for public sector transport companies; and (iv) establishment of a regulatory body to (a) monitor fertilizer quality, (b) prevent adulteration, and (c) prevent exploitative pricing by private and public sector marketers.

47. The TA report provided comprehensive, expert advice to MFEP and MFAL on the deregulation of the fertilizer subsector. Counterpart staff who participated in the conduct of the study learned valuable lessons that can help them conduct similar studies. The performance of the TA consultants is rated satisfactory.

#### **E. Compliance with Loan Covenants**

48. The status of loan covenant compliance remained unchanged between the time that the PCR was written and the OEM took place. The Government has complied with almost all covenants (PCR, Appendix 2). The only noncompliance relates to the plant variety protection legislation. This legislation is currently being redrafted in the light of new advances in biotechnology. The Government did not implement the assurance given in its agricultural policy letter in 1990 to reorient public sector investment to the rehabilitation and improvement of existing agricultural facilities.

#### **F. Monitoring**

49. The Program did not stipulate any mechanism to monitor the implementation of policy reform measures and the achievements of other objectives. There were no performance targets or other mechanisms to monitor compliance with loan covenants, midterm policy reviews, or provisions for evaluation of policy impacts. MFEP made little or no effort to collect information relating to the progress of the Program. At the time of the OEM, ADB had not yet implemented the PCR recommendation to continue to monitor the Program to ensure that the Government (i) continues to comply with its present policy of deregulating the fertilizer subsector, (ii) eliminates/restructures concessions related to wealth tax, and (iii) submits proposed legislation concerning plant variety protection to the Cabinet. Although the Economic Affairs and Statistics Division was given the task of monitoring and coordinating the activities funded by the Program, no formal unit for program monitoring was established, and no effort was made to monitor its progress. There was no progress report indicating ADB has followed up on the recommendations of the PCR.

### III. PROGRAM RESULTS

#### A. Agriculture Sector Performance

50. Pakistan's agriculture sector has been performing below expectation for the last two decades and it now appears to be stagnating. The sector's share of gross domestic product fell from about 40 percent in the 1960s to 30 percent in the 1970s, and declined to about 25 percent in the 1980s and 1990s (Appendix 4, Table A4.4). The sector grew at an annual rate of about 3 percent from 1950 to 1997 but this rate was still below the 6-7 percent that could be achieved if agricultural resources, particularly irrigation, were managed well. During the initial years of the Program (1990-1994), there was a relatively good growth rate of about 5-6 percent per annum (with the exception of FY1993, when -5.3 percent was registered due to extensive cotton crop damage caused by the leafcurl virus). In recent years (FY1997-FY1999), the average annual rate of agricultural output was less than 1 percent.

51. The overall impact of the program policy reforms on the national agriculture sector is difficult to assess. There were so many factors affecting the overall growth of the sector and the program reform measures were only subsets of agricultural policies. Plant diseases and climatic factors had a major role effect on sector output. In addition, the Government changed six times in the 1990s, and there were significant changes of senior officials with each change of Government.

52. The yields and total production for the nine main crops grown in Pakistan have not increased substantially over the last decade (Appendix 4, Table A4.5). The annual yield growth rate has been in the range of 2 to 4 percent. These yield increases are small and current yields are about 50 to 70 percent below their potential. Farm yields are still low and the absence of any significant yield increases has dampened the overall growth rate of this sector.

#### B. Impact of Specific Program Measures

53. **Deregulation of the Fertilizer Sector.** The main impact of the removal of the subsidy has been a sharp increase in the price of imported fertilizer (diammonium phosphate and sulphate of potash) relative to locally manufactured fertilizer (urea). The net effect is that farmers use mostly urea (nitrogenous) fertilizer rather than a compound fertilizer that would give higher yields. It is estimated that less than 1 percent of wheat farmers use a combination of nitrogen, phosphate, and potassium fertilizers. The private sector does not have an interest in promoting the use of compound fertilizers as private companies are mainly involved with urea manufacturing and marketing. The profits from urea production and sale far outweigh the profits from selling imported compound fertilizers. Removing the fertilizer subsidy cannot enable farmers to achieve efficient resource allocation without accompanying reforms relating to wheat and other agricultural crops procurement prices (para. 26).

54. The policy of encouraging private sector participation in fertilizer import and distribution is only partially successful as the private sector cannot compete with the public sector agencies that continue to receive favorable treatment (para. 14). Fertilizer prices are fixed by the Government, which defeats the purpose of deregulating the fertilizer subsector and allowing market forces to determine fertilizer prices. The impact of the removal of the fertilizer price subsidy on the farmer is negative since the farmer ends up paying more for fertilizer, while the Government subsidy to urea manufacturers has not led to lower fertilizer prices. Farmers pay 20-40 percent more for urea than they would if free market forces were to determine fertilizer prices.

55. In the case of fertilizer distribution, the disincentive to wider private sector participation is the Government policy of uniform pricing of fertilizer. Private companies have generally confined their distribution network to the more accessible regions, leaving public sector agencies to serve the more remote areas. The public sector agencies receive a transport subsidy from the Government for operating in remote areas. Although the Government is encouraging greater private sector participation, its current position is to ensure that fertilizer reaches remote areas at reasonable prices, and hence public sector agencies are to be supported until the private sector can take over.

56. **Deregulation of Seed Sector.** The policy reforms for this sector have been partially successful. The move to allow greater private sector participation did not have the desired impact of greater domestic seed production (paras. 20 and 21). Out of the 313 seed companies registered in the country, only one is currently producing seeds in the country. About 65 percent of the certified seeds used in Pakistan are imported. This high dependence on imported seeds is undesirable because it is expensive, its quality is not assured, and it brings with it the possibility of introducing new diseases. The Program did not assess the need for improved seed testing facilities in the country to ensure that imported seeds are free from disease and are suitable for local conditions. The net impact of this reform on the farmer has been negative since farmers now have to pay higher prices for imported seeds that have not been tested for local conditions. The supply of local certified seeds from Government agencies has been reduced. As a consequence, the use of improved and certified seeds by the farmers has been low.

57. **Agricultural Wealth Tax.** While the Program has been successful in pressing for the adoption and enforcement of this tax, the amount of tax collected has been minimal (para. 35). The Government faces problems of inadequate rural infrastructure and institutional capacity in collecting taxes. Nevertheless, the Program has succeeded in introducing the agricultural wealth tax, setting the stage for a wider acceptance of agricultural taxation.

58. During field visits, the OEM observed that tax collectors are generally powerless to collect taxes from large landowners who are politically well connected. The main problem appears to be the lack of urgency on the part of the Government to collect this tax and it is doubtful that external pressure (from ADB) alone will be successful. Also, the offices of the Central Board of Revenue are based mostly in urban centers, and their institutional capabilities and rural network are weak, preventing effective agricultural wealth tax collection. The impact of this reform measure has been insignificant and will remain so until there is a change in the Government attitude to the collection of this tax.

59. **Irrigation Cost Recovery.** The irrigation subsector accounts to about 90 percent of total agricultural output. Improving the efficiency of irrigated agriculture is vital to bringing about higher growth in agriculture. The Program had little impact on the full cost recovery of irrigation O&M. The measures proposed in the Program and adopted by the Government were, essentially, changes in administrative procedure and did not address the crucial issue of improving the efficiency of water delivery and raising ISF. The inefficiency of the water delivery system, absence of a sense of local ownership, poor management, and the lack of urgency in collecting ISF are factors that need to be addressed before it is possible to have any improvement in the recovery rate. From FY1991 to FY1998, the ISF increased by only 37 percent while the O&M cost increased by 220 percent, thus resulting in a 365 percent increase in the Government budget.

60. **Government Subsidies.** The Program's objective of reducing the level of Government subsidy to the agriculture sector was not met. The total agricultural subsidy (fertilizer, gas for urea manufacturing, irrigation, and food) increased from PRs13.66 billion in FY1991 to PRs23.78 billion

in FY1998, or an increase of 74 percent. In contrast, the increase in wealth tax collected in FY1998 was only PR\$22 million.

61. **Waterlogging and Salinity Control.** While waterlogging and salinity are widely acknowledged as major hindrances to increasing agricultural production, there is no definite long-term plan to overcome the problems. Currently, definitive data on the extent and location of problem soils is not available. The inclusion of this item in the program package of reform appears to be merely cosmetic. The Program had little impact on waterlogging and salinity control and thus had little effect on increasing crop productivity and production area.

62. **Export of Fruits and Vegetables.** Government efforts to expand the production and export of fruits and vegetables were curtailed by a lack of funds. The Government's proposal to provide a 25 percent freight subsidy was poorly conceived, as there was a lack of cargo space and cold storage facilities for perishable produce. No provision was made for postharvest and processing facilities to assist exporters. No studies were conducted forecasting production levels and marketable surplus of these commodities to provide exporters with information on the quantity available for exports on a regular basis. Thus, fruit and vegetable exports remained small and the program objective of increased foreign exchange earnings was not realized.

### **C. Institutional Development**

63. To a large extent, the Program depended on the existing capacity of the Government to implement policy reforms and the envisaged sector investments. ADB provided TA to identify policies for deregulation and privatization of fertilizer import and marketing (para. 46). The institutional capacity of MFEP and MFAL was strengthened in terms of better knowledge in loan administration and management, as well as initiating policy reform measures and performing functions related to loan covenants for future project compliance. The TA provided MFAL staff, in collaboration with the consultants, an opportunity to study the fertilizer subsector, identify issues and priorities, and identify appropriate measures to deregulate and privatize the fertilizer industry. Important lessons learned from the TA provided MFAL staff with the capability to review the agriculture sector and adopt reform measures.

### **D. Socioeconomic Impact**

64. There was no monitoring mechanism built into the Program to measure its socioeconomic impact. It is likely that the Program had only a minimal impact on the socioeconomic development in rural areas. The national gross domestic product per capita increased from PR\$7,600 in 1990 to PR\$18,100 in 1997. In real terms, this represents an increase of about 16 percent. Total labor force in the agriculture sector increased from 15.3 million in 1989 to 16 million in 1999, an increase of 4.6 percent, although agriculture's share of the total labor force declined from 50 to 44 percent over this 10-year period. It is not possible to determine the extent to which the Program contributed to such socioeconomic impact.

65. Field observations and discussions with farmers indicate that the increase in fertilizer prices resulting from the removal of the fertilizer subsidy, and the increase in the cost of imported seeds, had a negative impact on low-income farmers. The vast majority of poor farmers do not have a significant marketable surplus, so they do not benefit from the higher support prices for output.

66. In the drive to achieve greater privatization in agriculture, there is the real danger that many poor farmers will incur higher debts and eventually be forced to sell their farms to large landholders

and work as tenant farmers. A recent study has shown that the percentage of the population living below the poverty line has increased from about 25 percent in FY1994 to about 35 percent in FY1999.<sup>11</sup> Although the Program was not directly responsible for this situation, it is difficult to credit the Program with a role in reducing rural poverty.

#### **E. Environmental Impact and Control**

67. Policy measures to increase funding for the control of waterlogging and salinity, and the proper use of fertilizer, were assumed in the Program to have a positive impact on the environment. However, no mechanism was established to monitor this impact. From discussions with concerned nongovernment organizations and from field visits, it appears that the policy measures had no significant impact on the environment. Without any concrete data, it is not possible to conclude that the Program had any positive or negative impact on the environment.

#### **F. Gestation and Sustainability**

68. Successive governments have accorded high priority to sustaining policy reforms deregulating the agriculture sector and promoting private sector participation in the sector. However, the decline in budget allocations by the Government to the agriculture sector is a major impediment to achieving high rates of growth. Thus, even if the Government accepts the need for comprehensive reform, the financial constraints experienced by the Government in recent years will make it difficult for it to provide sufficient resources to the agriculture sector to achieve the desired results. For example, more resources are needed for research and extension. Government regulatory agencies must be strengthened to monitor the activities of the public and private sectors so that they do not exploit farmers by colluding on setting prices for inputs and outputs. The budget allocations for capital and operating expenses of all agricultural agencies have been drastically reduced in the last five years and this has reduced their ability to effectively support agricultural development. The regulatory functions of the Government are also weak and this hampers the effective control of illicit trade activities. The current funding constraints, coupled with the recent change of Government, make program reforms less sustainable.

### **IV. KEY ISSUES FOR THE FUTURE**

#### **A. Weak Research and Extension**

69. About 90 percent of Pakistan's agricultural output is derived from irrigated farms. The low growth rate of the agriculture sector has been attributed to poor irrigation efficiency, which leads to poor crop yields and low farm incomes. The provincial irrigation departments are not getting the appropriate research and extension support to deal with the serious O&M problems in water delivery and drainage systems. Weak research extension efforts in Pakistan have been a perennial problem contributing to low crop yields and poor irrigation efficiency in the agriculture sector. The main factors contributing to weak research and extension are (i) inadequate funding and low wages for research and extension staff, (ii) misallocation between administrative and action components, and between capital items and operating fund, (iii) inadequately trained extension staff, and (iv) poor linkages between research institutions and extension departments. To make the

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<sup>11</sup> Qureshi, S. K., and G.M. Arif. 1999. *Profile of Poverty in Pakistan 1998-99*. Pakistan Institute for Development Economics. Islamabad.

situation more complex, each provincial government has its own research and extension program, resulting in an extensive duplication of efforts and inefficient use of resources. To improve agriculture sector output, this issue of ineffective research and extension must be addressed on a priority basis to resolve the irrigation efficiency and water management problems in the provinces.

#### **B. Unfair Competition from Public Sector Agencies**

70. Although the Government now allows the private sector to participate in the import and distribution of fertilizers (para. 14), it continues to support public sector agencies. The private sector's reluctance to increase its role in imports is due to the imposition of a 5 percent withholding tax on imports by private companies, while public sector agencies are exempted from this tax. In the case of fertilizer distribution, the disincentive to wider private sector participation is the Government policy of uniform pricing of fertilizer. This has resulted in private companies generally confining their distribution network to more accessible regions and leaving the public sector marketing agencies to serve the more remote areas. The public sector agencies receive a transport subsidy. In the edible oils and certified seeds subsectors, there is a lack of Government support facilities, such as research and development, testing laboratories, and other support infrastructure, to provide incentives for private companies to invest in the agriculture sector. These, and other distortions, have created an unfair advantage for public sector agencies that hampers greater private sector participation in the agriculture sector. Increased private sector participation would bring about growth and greater efficiency in the sector.

#### **C. Lack of Political Will to Collect Agricultural Wealth Tax**

71. While the Program has been successful in introducing an agricultural wealth tax, the amount of tax collected is minimal. The Government is reluctant to effectively collect this tax, as illustrated by the constant delay in raising the PIU on land and by the increase in exemption level on taxable income. The main problem appears to be a lack of will on the part of the Government to collect this tax as most landholders in the agriculture sector are politically well connected. Little success is expected in this area. Increased collection of agricultural wealth tax would help to broaden the revenue base and reduce the country's budget deficit.

#### **D. Declining Government Budget for Agriculture**

72. Public sector agricultural investments declined significantly during the last decade (para. 41). The Government's spending on agriculture decreased by about five times during this period. The sharp cutback in Government spending in the agriculture sector has resulted in a significant deterioration in rural support facilities, particularly in research and development, export promotion of fruits and vegetables, and extension services, and subsequently slowed the rate of agricultural growth. This trend needs to be reversed quickly if agricultural productivity and growth are to be restored.

#### **E. Poor Cost Recovery of Irrigation O&M**

73. The Government has done little to increase the cost recovery of irrigation O&M. Irrigation O&M increased by more than 200 percent nationwide, while the ISF collected declined from 39 to 24 percent, from FY1991 to FY1998. In this respect, the reform measure to increase the cost recovery of irrigation O&M has been insignificant. Since irrigation expenditure is currently the largest item in the agriculture sector budget, there is an urgent need to examine the issue of cost recovery. Full cost recovery of irrigation O&M would lead to greater irrigation efficiency.

## **F. Incomplete Deregulation of the Fertilizer Sector**

74. Despite the apparent deregulation of the fertilizer subsector, the Government still plays an active role in (i) controlling the amount of fertilizer imported annually, (ii) determining the retail price of fertilizer, and (iii) restricting the export of fertilizer. The import controls ensure that prices (especially of urea) are maintained at a level that does not affect the profitability of the domestic urea factories. The Fertilizer Review Committee, which includes representatives from the private sector and is chaired by the secretary of MFAL, reviews the demand and supply of fertilizer and sets the import quota on a biannual basis. The retail prices of fertilizer are set by MFAL annually in consultation with both public and private sector marketing organizations. This arrangement is particularly favorable to domestic urea producers since it ensures higher prices than would be possible in a free market. The prices fixed for both phosphate and potassium are usually especially high, enabling importers to make substantial profits. Deregulation needs to be completed to encourage greater private sector participation in the subsector and liberalize the market.

## **V. CONCLUSION**

### **A. Overall Assessment**

75. **Program Appropriateness and Relevance.** At the time of program preparation, Pakistan's agriculture sector was plagued with price distortions and low farm productivity, and was in urgent need of significant policy reforms. The country faced severe budget deficit problems. Thus, the Program loan was provided at a time when the need for significant reforms was crucial to increase agricultural productivity and efficiency. The quick disbursement nature of the loan was intended to ease the severe financial crisis facing the country in 1990. The loan supported the Government in the implementation of a series of policy reform measures and strategic adjustments to revitalize and stabilize the agricultural economy. The program reform measures instituted were appropriate and relevant to the needs of the country at the time of the loan. These reform measures are crucial in helping to liberalize the agricultural commodity market to progress toward a free market economy, as well as to increase the operational efficiency of the sector.

76. **Program Impact and Efficacy.** The Program's objectives were too broad, covering a number of issues. Each issue was complex and the proposed changes had ramifications for the entire economy. There was an absence of detailed policy studies showing the impact of the proposed changes (such as the removal of the fertilizer subsidy leading to an increase in the difference between crop procurement and border prices). Over the program period, the agriculture sector registered only nominal growth. Sectoral growth has been insignificant at below 1 percent in recent years. Although achievements were made in the removal of fertilizer subsidies and the greater private sector participation in the import and export of agricultural commodities, there are still many market distortions such as low procurement prices for wheat and oilseeds, high consumer price subsidies for wheat, and significant involvement of public sector agencies in fertilizer marketing and distribution.

77. Revenue collection from the agriculture sector remains low. The agricultural wealth tax has not generated the expected revenue and irrigation O&M cost recovery still has a long way to go. The decision to increase the wheat procurement price has resulted in large subsidies being provided to wheat procurers, millers, and wholesalers. The seed deregulation policies have led to the country's high reliance on foreign materials and reduced the domestic effort in developing high-yielding varieties suitable to local conditions. The savings in fertilizer subsidy have been nullified by the increased expenditure on the subsidies to urea manufacturers and public sector fertilizer

agencies. Public spending in the agriculture sector has declined substantially over the last 10 years. Reduced budgets have weakened agricultural institutions, seriously impairing their abilities to provide basic services such as research, extension, and regulatory functions.

78. The policy and development agenda of the Program lacked priorities and performance indicators, and the implementation arrangements did not provide for coordination and cooperation among the concerned stakeholders and institutions, including government line agencies. This severely limited monitoring of progress, midcourse adjustments in the Program, and effective policy dialogue between the Government and ADB. The absence of clear targets for this Program has left both ADB and the Government with a false sense of achievement in instituting reforms. The impact of the reforms and their implications have not been examined in detail, with the emphasis in analysis mainly on compliance with loan covenants. Overall, the impact of the policy reforms is not significant. The Program has yet to achieve the ultimate objective of promoting a free market for agricultural inputs and outputs. Thus, program efficacy is less than satisfactory.

79. **Program Sustainability.** Although most of the envisaged reform measures have been introduced, the Government is reluctant to effectively implement reforms that are politically sensitive, including collection of the agricultural wealth tax and removal of consumer price subsidies in wheat and other commodities. Government funds for implementing these reform measures remain inadequate. There has been little support for rural infrastructure facilities, extension and research, and development. The Government has reduced its spending on agricultural development, both in absolute and percentage terms, over the last decade. Program sustainability is less likely as a result of this.

80. **Program Rating.** The Program has had a mixed results. It was overly ambitious in pushing for a wide range of reforms. The Program's achievements include removal of fertilizer subsidy, limited increase in wheat procurement price, decrease in consumer wheat price subsidies, and enactment of the agricultural wealth tax act. At the same time, many reforms were not carried out effectively. These include cost recovery of irrigation O&M, active involvement of the private rather than the public sector, and agricultural wealth tax collection. The overall program performance is rated less than successful.

81. **Borrower Performance.** The Program was implemented in a highly traditional agriculture sector with poor governance. During the program period, there were numerous changes of Government, accompanied by changes in top Government officials who are key to policy decisions and implementation. As a consequence, the Borrower's performance in adopting policy reforms has been inconsistent and shows weak commitment to implementing the reforms. In implementing reforms that are politically sensitive, such as removal of wheat consumer price subsidies and collection of agricultural wealth tax, the Government performed poorly. Similarly, the Government's commitment in promoting fruit and vegetable exports, oilseeds development, removal of consumer price subsidies, and greater private sector participation in the agriculture sector has been less than satisfactory.

82. **ADB Performance.** At the formulation and preparatory stages of the Program, ADB provided significant input in (i) its policy dialogues with the Government, and (ii) coordination with the World Bank and other funding agencies in identifying the appropriate policy reforms and preventing any duplication of work among the funding agencies. During program implementation, ADB fielded 6 missions, comprising 1 inception, 4 review, and 1 loan administration. Most missions were engaged on loan administration matters, monitoring to meet loan conditionalities for the second tranche release, and issues of compliance with loan covenants. Although a mission was fielded for policy discussion toward the end of program implementation, it did little to ensure effective implementation. Overall, ADB's performance has been satisfactory.

## **B. Lessons Learned**

### **1. Program Prioritization and Design**

83. The Program contained too many reform measures and each of them was treated too broadly to be effective in bringing about meaningful changes. The sequencing of the reforms was poorly thought through. There was an absence of clear targets to be achieved in a time-bound policy framework. An important lesson learned is that future policy reforms to be pursued by ADB must be specific, prioritized, and focused on a few specific and relevant issues pertaining to ADB's strategic objectives in the country. The central thrust of the Program should be based on greater reliance on market forces and reforms that aimed to correct distortions, such as removal of all form of subsidies and improving agricultural operational efficiency. Since irrigated agriculture accounts for about 90 percent of agricultural outputs in Pakistan, improving irrigation efficiency through institutional reforms (such as full O&M cost recovery, proper research and extension in water management, and strengthening of irrigation users associations) will be key to increasing the sector's productivity. The policy reforms to be pursued should be thoroughly discussed with the Government and other funding agencies to avoid duplication and ensure commitment. The policy goals should be properly assessed and related to quantifiable and time-bound targets. This would allow effective monitoring and provide the opportunity to make midcourse corrections. It would also provide a benchmark for subsequent evaluation of impact.

### **2. Program Implementation and Timing**

84. One important lesson learned is that, to implement a program in a highly traditional society, with politically well-connected landholders and vested interest groups, in a country with poor governance, requires a step-by-step approach and long-term commitment. It would have been better to have the loan fund disbursed over a longer period (5-10 years) with the disbursement conditional on real progress in reforms that led to market liberalization. Alternatively, the disbursement schedule of future program loans should, as far as possible, be tied to the incurring of relevant costs. In this manner, a constituency of support can evolve, reflecting civil participation in the process. It would also encourage ongoing policy dialogue and facilitate adjusting the policy matrix to gain better sequencing of reform measures.

### **3. Politically Sensitive Reform Measures**

85. Due to political resistance by certain vested interest groups (such as powerful landholders and urban groups) the Government lacks the commitment to carry through reform measures such as the agricultural wealth tax and removal of consumer wheat subsidies. An important lesson learned is that reform measures that have significant political and social implications need to be carefully assessed to determine the Government's commitment, institutional capability for implementation, and good governance. It is futile to include such reforms in the program if the Government is weak and is not capable of implementing the proposed measures.

### **4. Program Prioritization and Linkages**

86. In formulating a program, it is important to prioritize the reforms based on sector needs and ADB's strategic objectives in the country. The linkage between reforms should be clearly identified. In the case of this program, the removal of fertilizer subsidy was not accompanied with a full

increase in the wheat procurement price. Thus, farmers were faced with a higher fertilizer price, but the farm procurement price for wheat and other crops was low. This resulted in low use of fertilizers and low farm productivity.

### C. Follow-Up Actions

87. The policy reform agenda for this program is incomplete. The lessons learned are important for both the Government and ADB for subsequent interventions in the agriculture sector. Over the next 12 months, the Government should review and assess the shortcomings of the reforms, and formulate appropriate policies and follow-up actions to carry out sector deregulation and reforms that will bring about greater efficiency in the agriculture sector. The Government should review and assess program performance and draw up a timetable for continuing reforms. Specifically, action must be taken for the complete removal of consumer subsidies on wheat and other commodities, termination of urea manufacturing subsidies, increase in the wheat procurement price to bring it in line with international prices, dismantling of all public sector agencies involving fertilizer marketing and distribution, and provision of more funds to improve rural infrastructure and irrigation efficiency. ADB's concerned programs division should monitor the progress on reforms when it fields the country programming mission in 2001.

88. In July 1999, ADB approved a TA<sup>12</sup> to help the Government undertake a comprehensive review of the sector policies and determine an appropriate package of reforms to strengthen the Program's achievements. This ongoing TA will help the Government formulate an appropriate development strategy for the sector. ADB should closely monitor the progress of this TA and ensure that the lessons learned with the Program are properly incorporated in the ensuing Program loan.

89. A summary of follow-up actions is given in the table.

#### Follow-Up Actions

	Measure/Action	Time	Responsible Unit	Output Indicator
1.	Review and reassess program policy measures	Dec 2000	Ministry of Finance and Economic Planning	Review report
2.	Monitor the Program and hold policy dialogue with Government during Country Programming Mission in 2001	2001	ADB's Programs Division West 1	Country Programming Mission (back-to-office report)
3.	ADB TA for second Program loan	Dec 2000	ADB's Agriculture and Rural Development Division (West)	Consultants' TA report

ADB = Asian Development Bank, TA = technical assistance.

<sup>12</sup> TA 3229-PAK: *Agriculture Sector Program*, for \$350,000, approved on 20 July 1999.

## APPENDIXES

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## FERTILIZER SUBSIDIES, CONSUMPTION, AND PRICES

**Table A1.1: Total Government Subsidies for Local and Imported Fertilizer**  
(PRs million)

Financial Year	Local Fertilizer		Imported Fertilizer		Total Amount
	Amount	Percent	Amount	Percent	
1986	1,131	47	1,278	53	2,409
1987	399	31	885	69	1,284
1988	186	9	1,809	91	1,995
1989	366	15	2,049	85	2,415
1990	208	17	1,049	83	1,257
1991	192	15	1,056	85	1,248
1992	264	22	927	78	1,191
1993	113	14	697	86	810
1994	0	0	583	100	583
1995	0	0	67	100	67
1996	0	0	47	100	47

Source: National Fertilizer Development Centre. 1998. Fertilizer Review, 1997/98. Islamabad.

**Table A1.2: Fertilizer Consumption in Pakistan by Nutrients, FY1976-FY1999**  
(‘000 ton)

Financial Year	Nutrients			Total	N:P Ratio	N:K Ratio
	Nitrogen (N)	Phosphate (P)	Potassium (K)			
1976	442	104	8	554	4.25	55.25
1981	843	227	10	1,080	3.71	84.30
1986	1,128	350	33	1,511	3.22	34.18
1988	1,282	393	45	1,720	3.26	28.49
1991	1,472	389	33	1,894	3.78	44.61
1996	1,991	494	30	2,515	4.03	66.37
1997	1,985	419	8	2,412	4.74	248.13
1998	2,087	551	20	2,658	3.79	104.35
1999	2,096	460	21	2,577	4.56	99.81
<b>Growth rate (%)</b>						
1998	4.99	3.44	(7.79)	4.45		

N:K ratio = nitrogen/potassium ratio, N:P ratio = nitrogen/phosphate ratio.

Sources: Ahmad, Nisar. 1999. *Fertilizer Scenario in Pakistan. Proceedings of Conference on Agriculture and Fertilizer Use by 2010*. National Fertilizer Development Centre. Islamabad.

**Table A1.3: Fertilizer Consumption in Pakistan**  
(‘000 ton)

Financial Year	Major Products			Total Production & Imports			Domestic (%)	Imports (%)
	Urea	DAP	SOP	Total	Domestic	Imports		
1976	781	137	20	938	508	430	54	46
1981	1,342	230	19	1,591	906	685	57	43
1986	1,728	494	66	2,288	1,560	729	68	32
1988	2,174	549	90	2,813	1,954	860	69	31
1991	2,553	574	66	3,193	1,885	1,307	59	41
1996	3,648	852	59	4,559	2,838	1,722	62	38
1997	3,642	727	17	4,386	3,296	1,089	75	25
1998	3,802	1,016	40	4,858	3,447	1,412	71	29
1999 <sup>a</sup>	3,899	831	20	4,750	3,550	1,200	75	25

DAP = diammonium phosphate, SOP = sulphate of potash.

<sup>a</sup> Preliminary figures.

Sources: Ahmad, Nisar. 1999. *Fertilizer Scenario in Pakistan. Proceedings of Conference on Agriculture and Fertilizer Use by 2010*. National Fertilizer Development Centre. Islamabad.  
Government of Pakistan. 1998. *Economic Survey – Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A1.4: Fertilizer Distribution and Imports by the Public and Private Sectors**  
(‘000 ton)

Financial Year	Distribution			Imports				
	Public Sector	Private Sector	Total	Public Share (%)	Public Sector	Private Sector	Total	Public Share (%)
1991	2,221	1,958	4,179	53	0	0	0	0
1992	2,305	1,849	4,154	55	0	0	0	0
1993	2,241	2,432	4,673	48	0	0	0	0
1994	1,726	2,839	4,565	38	0	0	0	0
1995	1,832	2,846	4,678	39	0	0	0	0
1996	1,946	3,172	5,118	38	864	194	1,058	82
1997	2,062	3,623	5,685	36	1,238	448	1,686	73
1998	1,854	3,250	5,104	36	935	115	1,050	89
1999	1,647	3,711	5,358	31	625	784	1,409	44

Sources: PCR: PAK 22272: *Agriculture Program Loan*. May 1996.

Ahmad, Nisar. 1999. *Fertilizer Scenario in Pakistan. Proceedings of Conference on Agriculture and Fertilizer Use by 2010*. National Fertilizer Development Centre. Islamabad.

**DISTRIBUTION OF CERTIFIED SEEDS, BY CROPS**

**Table A2.1: Irrigation Operation and Maintenance, and Cost Recovery Rates**  
(PRs million)

Financial Year	Punjab			Sindh			NWFP			Balochistan			Total		
	O&M	ISF	Recovery (%)	O&M	ISF	Recovery (%)	O&M	ISF	Recovery (%)	O&M	ISF	Recovery (%)	O&M	ISF	Recovery (%)
1991	1,773	921	52	1,157	345	30	367	43	12	123	22	18	3,420	1,331	39
1992	2,385	862	36	1,260	375	30	526	43	8	163	17	10	4,334	1,297	30
1993	2,807	664	24	1,502	147	10	556	44	8	179	21	12	5,044	876	17
1994	3,135	725	23	795	240	30	509	58	11	48	18	37	4,487	1,041	23
1995	3,312	960	29	814	266	33	572	74	13	51	16	32	4,749	1,316	28
1996	3,889	860	22	1,530	325	21	639	93	15	51	20	39	6,109	1,298	21
1997	4,320	900	21	1,800	450	25	669	116	17	56	25	45	6,845	1,491	22
1998	4,752	1,080	23	1,980	563	28	736	145	20	62	32	51	7,530	1,820	24

ISF = irrigation service fee, NWFP = Northwest Frontier Province, O&M = operation and maintenance.

Sources: PCR: PAK 22272: *Agriculture Program Loan*, May 1996.

Government of Pakistan. Ministry of Water and Power, provincial irrigation departments of Punjab and Sindh. 1999. Islamabad.

**Table A2.2: Distribution of Certified Seeds, by Crops**  
(‘000 ton)

Financial Year	Wheat	Paddy	Maize	Cotton	Potato	Others	Total
1990	45.57	1.40	1.07	12.12	0.04	0.45	60.65
1991	43.44	1.14	1.55	14.44	0.07	0.39	61.03
1992	45.70	1.48	0.93	14.42	2.20	0.35	65.08
1993	49.40	2.51	0.58	11.05	0.07	0.32	63.93
1994	50.11	1.60	0.21	10.51	0.66	0.18	63.27
1995	63.29	1.64	0.15	11.04	0.47	0.28	76.87
1996	65.44	1.13	0.21	8.55	0.51	0.41	76.25
1997	58.77	1.34	0.22	5.48	0.00	0.19	66.00
1998	65.04	1.35	0.05	4.54	0.08	0.87	71.93

Sources: PCR: PAK 22272: *Agriculture Program Loan*, May 1996.  
Government of Pakistan. 1998. *Agricultural Statistics of Pakistan, 1997/98*. Islamabad.

**Table A2.3: Distribution of Certified Seeds, by Crops**  
(% of total seed)

Financial Year	Wheat	Paddy	Maize	Cotton	Sunflower
1991	6.39	5.67	6.39	52.37	—
1992	7.74	8.21	7.27	32.67	75.48
1993	8.72	4.73	7.45	32.19	30.27
1994	9.92	7.54	5.18	43.64	66.02
1995	13.36	7.79	6.18	55.85	68.38
1996	12.52	7.56	3.36	60.40	72.52
1997	12.47	5.90	1.62	51.59	46.11
1998	11.58	3.82	4.94	41.68	58.50
1999	14.93	4.73	4.61	51.02	71.88

— = no data available.

Source: Government of Pakistan. 1999. *Federal Seed Certification Department*. Islamabad.

### CONSUMPTION AND PRICES OF VARIOUS CROPS

**Table A3.1: Nominal and Real Support Prices for Wheat, FY1991-1999**

Financial Year	CPI FY1991=100	Support Price (PRs/kg)	
		Nominal	Real
1991	100	2.80	2.80
1992	111	3.10	2.80
1993	121	3.25	2.68
1994	135	4.00	2.95
1995	153	4.00	2.62
1996	169	4.33	2.56
1997	189	6.00	3.17
1998	204	6.00	2.94
1999	216	6.00	2.77

CPI = consumer price index, kg = kilogram.

Sources: Government of Pakistan. 1999. *Agricultural Prices Commission, September 1999*. Islamabad.

Government of Pakistan. 1998. *Economic Survey - Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A3.2: Nominal Support Prices for Non-traditional Oilseeds  
(PRs/40 kg bag)**

Financial Year	Sunflower	Safflower	Soybean
1991	225	180	200
1992	250	220	230
1993	280	220	250
1994	315	270	275
1995	315	270	275
1996	315	270	275
1997	450	300	345
1998	450	300	345
1999	500	350	410

kg = kilogram.

Sources: PCR: PAK 22272: *Agriculture Program Loan, May 1996*.

**Table A3.3: Import Parity for Wheat**  
\$/ton (constant 1999 prices)

Item	Actual						Projected	
	1988	1990	1995	1997	1998	1999	2005	2010
FOB (constant 1990 prices)	158	136	153	147	121	111	134	126
FOB (constant 1999 prices)	167	143	161	155	128	117	141	133
Quality Differential (-8%)	13	11	13	12	10	9	11	11
Freight and Insurance	40	40	40	40	40	40	40	40
CIF Karachi	193	172	188	183	157	148	170	162
Exchange rate (PRs/\$)	18	22	34	43	47	54	54	54
CIF Karachi	3,479	3,731	6,311	7,895	7,364	7,973	9,173	8,748
Port Charges	250	250	250	250	250	250	250	250
Handling and Storage	120	120	120	120	120	120	120	120
Transport - Karachi to Lahore	400	400	400	400	400	400	400	400
Traders Margin (5%)	174	187	316	395	368	399	459	437
Wholesale Price	4,423	4,688	7,397	9,060	8,502	9,142	10,401	9,956
Handling, Storage, Transport, and Margin	450	450	450	450	450	450	450	450
Economic Farmgate Price	3,973	4,238	6,947	8,610	8,052	8,692	9,951	9,506
Financial Government Support Price	4,582	6,037	5,585	6,855	6,355	7,500	7,500	7,500
Ratio - Financial/Economic	1.15	1.42	0.80	0.80	0.79	0.86	0.75	0.79

CIF = cost, insurance, and freight; FOB = free on board.

Notes: 1. Wheat, US No. 2, Gulf Port.

2. Financial Government support prices adjusted to 1999 prices using the gross domestic product deflator.

3. Financial support price for years 2000 and 2005 is assumed to remain at 1999 price.

Sources: World Bank, *Global Community Markets*. 1999. Washington, D.C.

Government of Pakistan. 1998. *Agricultural Statistics of Pakistan, 1997/98*. Islamabad.

**Table A3.4: Trends in Edible Oil Consumption, Production, and Imports**  
(FY1950-FY1999)

Financial Year	Consumption ('000 ton)	Production ('000 ton)	Imports ('000 ton)	Cost of Imports (PRs million)	Imports as % of Consumption
1950	106	106	0	0	0.0
1955	154	154	0	0	0.0
1960	164	157	7	37	4.3
1965	193	179	14	190	7.3
1970	269	255	14	77	5.2
1975	468	274	194	1,350	41.5
1980	601	255	346	2,295	57.6
1985	973	309	664	6,954	68.2
1990	1,292	330	962	8,262	74.5
1995	1,739	344	1,395	30,701	80.2
1996	1,671	528	1,143	28,673	68.4
1997	1,595	538	1,057	23,906	66.3
1998	1,765	586	1,179	33,304	66.8
1999	1,836	511	1,325	40,503	72.2

Sources: Government of Pakistan. 1999. *Agricultural Prices Commission*. Islamabad.  
Government of Pakistan. 1998. *Economic Survey - Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A3.5: Production of Fruits and Vegetables**  
(‘000 ton)

Financial Year	Citrus	Mango	Apple	Banana	Apricot	Almond	Grapes	Guava	Others <sup>a</sup>
1991	1,609	776	243	202	81	32	33	355	333
1992	1,630	787	295	44	109	38	36	373	331
1993	1,665	794	339	52	122	40	38	384	343
1994	1,849	839	442	53	153	45	40	402	382
1995	1,933	884	533	80	178	49	43	420	412
1996	1,960	908	554	82	191	49	72	442	426
1997	2,003	914	569	83	188	49	74	448	433
1998	2,037	917	573	94	189	49	74	455	439

<sup>a</sup> Assumed to be 10 percent of fruits identified.

Source: Government of Pakistan. 1998. *Economic Survey – Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A3.6: Exports of Fruits and Vegetables**  
(‘000 ton)

Financial Year	Citrus	Banana	Dates	Grapes	Chillie	Onion	Potato	Others	Total
1991	34.5	0.8	38.7	1.2	7.0	5.5	2.4	21.9	112.0
1992	24.7	3.7	33.1	1.7	19.6	12.2	5.6	24.4	125.0
1993	30.9	3.3	20.6	2.8	5.1	1.8	4.6	51.9	121.0
1994	28.0	1.1	38.4	1.4	3.4	28.8	3.5	22.4	127.0
1995	35.5	1.4	39.1	1.1	1.1	3.3	3.2	54.4	139.0
1996	38.4	2.4	45.6	1.2	1.1	5.6	6.3	34.6	135.1
1997	41.2	1.1	34.5	0.8	0.0	11.9	1.5	27.7	118.8
1998	89.7	2.5	60.9	0.4	0.8	18.7	0.1	29.0	202.2

Sources: PCR: PAK 22272: *Agriculture Program Loan*, May 1996.  
Food and Agriculture Organization. 1997. *Trade Yearbook, 1997*. Rome.

**Table A3.7: Value of Fruit and Vegetable Exports**  
(PRs million)

Financial Year	Fruit	Vegetable	Total
1991	987	259	1,246
1992	1,164	285	1,449
1993	1,259	257	1,516
1994	1,391	407	1,799
1995	1,384	352	1,736
1996	1,487	461	1,948
1997	2,776	581	3,356
1998	2,784	1,165	3,949

Sources: Government of Pakistan. 1998. *Agricultural Statistics of Pakistan, 1997/98*. Ministry of Food, Agriculture and Livestock. Islamabad.  
Government of Pakistan. 1995. *Pakistan Statistical Yearbook, 1995*. Islamabad.

**Table A3.8: Provincial and Federal Subsidies on Wheat, FY1991-FY1999**  
(PRs million)

Financial Year	Government Subsidy			Share of Total Subsidy (%)	
	Provincial	Federal	Total	Provincial	Federal
1991	1,988	762	2,750	72	28
1992	1,831	2,175	4,006	46	54
1993	1,325	2,148	3,473	38	62
1994	2,760	354	3,114	89	11
1995	1,890	1,449	3,339	57	43
1996	3,169	6,648	9,817	32	68
1997	5,173	5,761	10,934	47	53
1998	7,017	4,119	11,136	63	37
1999	7,494	0	7,494	100	0
<b>Total</b>	<b>32,647</b>	<b>23,416</b>	<b>56,063</b>	<b>58</b>	<b>42</b>

Source: Government of Pakistan. 1999. *Agricultural Prices Commission, September 1999*. Islamabad.

**Table A3.9: Agricultural Output Subsidies, FY1991-FY1998**  
(PRs million)

Financial Year	Wheat	Sugar	Edible Oil	Cotton	Total
1991	2,750	1,643	2,141	92	6,626
1992	4,006	1,906	188	141	6,241
1993	3,473	358	0	1,927	5,758
1994	3,114	447	455	800	4,816
1995	3,339	561	346	0	4,246
1996	9,817	940	346	0	11,103
1997	10,934	592	0	0	11,526
1998	11,136	1,019	0	0	12,155

Source: Government of Pakistan. 1999. *Agricultural Prices Commission, September 1999*. Islamabad.

**AGRICULTURAL SUBSIDIES, PUBLIC SECTOR EXPENDITURES,  
AND OTHER AGRICULTURE SECTOR INDICATORS**

**Table A4.1: Public Sector Expenditure Under Five Year Plans, FY1979-FY1998**  
(PRs billion)

Item	Fifth Plan (FY1979-FY1983)		Sixth Plan (FY1984-FY1988)		Seventh Plan (FY1989-FY1993)		Eight Plan (FY1994-FY1998)	
	Amount	%	Amount	%	Amount	%	Amount	%
	1. Agriculture							
a. Agriculture	6.06	3.97	8.12	3.38	12.30	3.79	5.20	0.87
b. Subsidy	8.80	5.77	9.19	3.83	3.30	1.02	0.50	0.08
<b>Subtotal</b>	<b>14.86</b>	<b>9.74</b>	<b>17.30</b>	<b>7.22</b>	<b>15.60</b>	<b>4.80</b>	<b>5.70</b>	<b>0.95</b>
2. Water	15.77	10.33	22.02	9.18	28.40	8.75	55.60	9.28
3. Power, Fuel, and Minerals	39.23	25.71	85.31	35.58	131.30	40.44	308.60	51.48
4. Industry	25.40	16.64	12.92	5.39	9.00	2.77	1.90	0.32
5. Transport and Communication	35.20	23.07	41.75	17.41	61.50	18.94	130.60	21.79
6. Planning and Housing	9.00	5.90	22.72	9.47	20.00	6.16	6.80	1.13
7. Education and Manpower	5.64	3.70	14.27	5.95	25.70	7.91	9.80	1.63
8. Health and Education	4.58	3.00	10.37	4.32	13.30	4.10	5.20	0.87
9. Others	2.93	1.92	13.10	5.46	19.90	6.13	75.20	12.55
<b>Total</b>	<b>152.61</b>	<b>100.00</b>	<b>239.75</b>	<b>100.00</b>	<b>324.70</b>	<b>100.00</b>	<b>599.40</b>	<b>100.00</b>

Source: Government of Pakistan. 1998. *Economic Survey – Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A4.2: Public Sector Annual Development Program, FY1991-1999**  
(PRs million)

Sector	FY1991		FY1993		FY1995		FY1997		FY1999	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Agriculture	3,042	3.44	3,461	2.88	2,004	1.30	1,210	0.87	431	0.28
Rural Development	6,405	7.24	5,354	4.47	7,346	4.78	7,984	5.71	10,232	6.70
Water	6,815	7.71	8,461	7.06	14,109	9.18	15,740	11.26	12,319	8.07
Power, Fuel, and Minerals	28,698	32.46	46,390	38.69	70,591	45.92	57,309	41.01	60,204	39.42
Industry	2,032	2.30	2,183	1.82	1,867	1.21	4,200	3.01	698	0.46
Transport and Communication	15,608	17.65	35,460	29.58	31,544	20.52	30,499	21.83	40,540	26.55
Planning and Housing	5,853	6.62	5,122	4.27	7,689	5.00	7,437	5.32	4,356	2.85
Education and Training	3,451	3.90	5,387	4.49	6,302	4.10	3,486	2.49	6,505	4.26
Health and Nutrition	2,739	3.10	2,152	1.79	3,598	2.34	4,317	3.09	3,485	2.28
Others	13,769	15.57	5,920	4.94	8,670	5.64	7,561	5.41	13,937	9.13
<b>Total</b>	<b>88,412</b>	<b>100.00</b>	<b>119,890</b>	<b>100.00</b>	<b>153,720</b>	<b>100.00</b>	<b>139,743</b>	<b>100.00</b>	<b>152,707</b>	<b>100.00</b>

Source: Government of Pakistan. 1998. *Economic Survey – Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A4.3: Annual Growth Rate in Gross Domestic Product, FY1991-FY1999**  
(%)

Sector	FY1991	FY1993	FY1995	FY1997	FY1999
Agriculture	5.0	(5.3)	6.6	0.1	0.4
Manufacturing	6.3	5.4	3.7	1.3	4.7
Mining and Quarrying	10.4	3.0	(4.3)	1.9	4.5
Construction	5.7	5.8	1.0	1.1	0.8
Electricity and Gas	11.0	6.4	16.8	(2.9)	2.7
Trade	5.4	3.9	4.6	0.7	1.3
Transport/Storage/Communication	6.3	6.7	4.2	3.8	5.3
Finance and Insurance	1.2	7.0	6.3	11.5	9.4
Home Ownership	5.3	5.3	5.3	5.3	5.3
Public Administration and Defense	3.3	2.5	3.1	2.2	3.2
Services	6.5	6.5	6.5	6.5	6.5

Source: Government of Pakistan. 1998. *Economic Survey - Statistical Supplement, 1998/99*. Finance Division. Islamabad.

**Table A4.4: Agriculture Sector Indicators, Pre- and Post-Program Loan**  
Constant Factor Cost, FY1969-FY1999

Item	FY1969	FY1979	FY1989	FY1999
Gross Domestic Product (PRs billion)	132.10	216.05	404.05	632.52
Share of Agriculture				
PRs billion	51.44	66.54	106.14	155.26
% of Gross Domestic Product	39.00	31.00	26.00	25.00
Exports (PRs billion)	1.70	16.92	90.19	181.55
Share of Agriculture				
PRs billion	1.26	10.76	62.52	115.43
% of Total Exports	74.00	64.00	69.00	64.00
Population (million)	58.00	78.90	107.00	134.50
Labor Force (million)	17.70	24.50	30.90	36.20
Share of Agriculture				
Labor (million)	9.70	12.40	15.30	16.00
% of Labor Force	55.00	51.00	50.00	44.00

Source: Government of Pakistan. 1998. *Economic Survey - Statistical Supplement, 1998/99*. Finance Division. Islamabad.

Table A4.5: Area, Yield, and Production of Major Crops in Pakistan

Item	FY1990	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	Average		Percentage Change (%)
											FY1990- FY1992	FY1997- FY1999	
<b>Area (million ha)</b>													
Wheat	7.76	7.91	7.88	8.30	8.03	8.17	8.38	8.11	8.38	8.33	7.85	8.27	5.35
Rice	2.12	2.11	2.10	1.97	2.19	2.13	2.16	2.25	2.32	2.42	2.11	2.33	10.43
Millet	0.51	0.49	0.31	0.49	0.30	0.51	0.41	0.30	0.46	0.46	0.44	0.41	(6.82)
Sorghum	0.42	0.42	0.38	0.40	0.37	0.44	0.42	0.37	0.39	0.40	0.41	0.39	(4.88)
Maize	0.81	0.85	0.85	0.87	0.88	0.89	0.88	0.87	0.87	0.89	0.84	0.88	4.76
Cotton	2.62	2.66	2.84	2.84	2.81	2.65	3.00	3.15	2.96	2.92	2.71	3.01	11.07
Sugarcane	0.84	0.88	0.90	0.89	0.96	1.01	0.96	0.97	1.06	1.16	0.87	1.06	21.84
Gram	1.04	1.09	1.09	1.00	1.01	1.05	1.07	1.12	1.10	1.09	1.07	1.10	2.80
Rapeseed & Mustard	0.31	0.30	0.29	0.29	0.27	0.30	0.32	0.35	0.33	0.33	0.30	0.34	13.33
<b>Yield (t/ha)</b>													
Wheat	1.93	1.84	1.99	1.95	1.89	2.08	2.02	2.05	2.23	2.17	1.92	2.15	11.98
Rice	1.52	1.54	1.55	1.58	1.83	1.62	1.83	1.91	1.87	1.93	1.54	1.90	23.38
Millet	0.40	0.40	0.44	0.42	0.46	0.45	0.40	0.48	0.46	0.46	0.41	0.47	14.63
Sorghum	0.62	0.57	0.59	0.59	0.58	0.60	0.61	0.59	0.61	0.60	0.59	0.60	1.69
Maize	1.46	1.40	1.42	1.36	1.38	1.48	1.46	1.45	1.44	1.47	1.43	1.45	1.40
Seed Cotton	1.68	0.61	0.77	0.54	0.49	0.56	0.60	0.51	0.53	0.51	1.02	0.52	(49.02)
Sugarcane	43.10	40.71	43.38	43.00	46.13	46.75	46.97	43.52	50.29	47.78	42.40	47.20	11.32
Gram	0.54	0.49	0.47	0.35	0.41	0.53	0.64	0.53	0.61	0.64	0.50	0.59	18.00
Rapeseed & Mustard	0.76	0.75	0.77	0.73	0.73	0.76	0.80	0.81	0.88	0.87	0.76	0.85	11.84
<b>Production (million t)</b>													
Wheat	14.98	14.57	15.68	16.16	15.21	17.00	16.91	16.65	18.69	18.06	15.08	17.80	18.04
Rice	3.22	3.26	3.24	3.12	4.00	3.45	3.97	4.31	4.33	4.67	3.24	4.44	37.04
Millet	0.20	0.20	0.14	0.20	0.14	0.23	0.16	0.15	0.21	0.21	0.18	0.19	5.56
Sorghum	0.26	0.24	0.23	0.24	0.21	0.26	0.26	0.22	0.24	0.24	0.24	0.23	(4.17)
Maize	1.18	1.19	1.20	1.18	1.21	1.32	1.28	1.26	1.25	1.30	1.19	1.27	6.72
Cotton	1.46	1.64	2.18	1.54	1.37	1.48	1.80	1.59	1.56	1.50	1.76	1.55	(11.93)
Sugarcane	36.20	35.99	38.87	38.06	44.43	47.17	45.23	42.00	53.10	55.19	37.02	50.10	35.33
Gram	0.56	0.53	0.51	0.35	0.41	0.56	0.68	0.59	0.67	0.70	0.53	0.65	22.64
Rapeseed & Mustard	0.23	0.23	0.22	0.21	0.20	0.23	0.26	0.29	0.29	0.28	0.23	0.29	26.09

ha = hectare, t = ton.

Sources: Government of Pakistan. 1998. *Economic Survey – Statistical Supplement, 1998/99*. Finance Division. Islamabad.  
Government of Pakistan. 1999. *Agricultural Statistics of Pakistan*. Islamabad.