

**REPORT
OF
MASTER PLAN STUDY
ON
PADDY/RICE HANDLING AND PROCESSING
IMPROVEMENT PROJECT
IN
THE ISLAMIC REPUBLIC OF PAKISTAN**

APPENDIX

AUGUST 1986

JAPAN INTERNATIONAL COOPERATION AGENCY

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APPENDIX A

Scope of Work for Master Plan Study for Paddy/Rice
and Processing Improvement Project

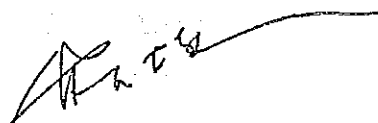
SCOPE OF WORK
FOR
MASTER PLAN STUDY
FOR
PADDY/RICE HANDLING AND PROCESSING IMPROVEMENT PROJECT
IN
THE ISLAMIC REPUBLIC OF PAKISTAN

AGREED UPON BETWEEN
ECONOMIC AFFAIRS DIVISION
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

ISLAMABAD, MARCH 14, 1985



F. I. MALIK
Joint Secretary
Economic Affairs Division



HIROTO TAKESHITA
Leader of Preliminary Survey Team
Japan International Cooperation
Agency

I. INTRODUCTION

In response to the request of the Government of ISLAMIC REPUBLIC OF PAKISTAN (hereinafter referred to as 'Pakistan'), the Government of Japan has decided to conduct THE MASTER PLAN STUDY FOR PADDY/RICE HANDLING AND PROCESSING IMPROVEMENT PROJECT (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, The Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study, in close cooperation with the authorities of Pakistan. The present document sets forth the scope of work with regard to the Study.

II. OBJECTIVE OF THE STUDY

The objective of the Study is to prepare a general and comprehensive plan on paddy/rice harvesting, threshing, drying, milling, storage and transportation improvement.

III. OUTLINE OF THE STUDY

The Study is composed of field work in Pakistan and home office work in Japan as follows.

1. Field Work

The Study team will conduct data collection and field survey on the following items, mainly in Punjab Province and Sind Province, in close cooperation with the authorities of Pakistan.

- (1) Farm-to-market flow and system
- (2) Harvesting, threshing, drying, milling, storage and transportation techniques
- (3) Facilities and equipments for harvesting, threshing, drying, milling, storage and transportation
- (4) Quantitative losses and qualitative losses of each stage
- (5) Causes of losses
- (6) Activities of relevant organizations excluding RECP (including farmers organizations)
- (7) Grading system and standard of inspection
- (8) Others

2. Home Office Work

Based on the results of field work, home office work will be carried out on the following items.

- (1) Data analysis and assessment
- (2) Formulation of a general and comprehensive plan for improvement
- (3) Recommendation for improvement

IV. WORK SCHEDULE

The Study will be executed in accordance with the attached tentative work schedule.

V. REPORTS

JICA shall prepare and submit following reports in English to the Government of Pakistan

- (1) Inception report
Thirty (30) copies at the commencement of field work
- (2) Field report
Thirty (30) copies at the end of field work

- (3) Draft final report
Thirty (30) copies within one (1) month after
the end of home office work
The Government of Pakistan is requested to
provide its comments on the draft final report
within one (1) month after its receiving
- (4) Final report
Fifty (50) copies within two (2) months
after receiving the comments on the draft
final report

VI. UNDERTAKING OF THE GOVERNMENT OF PAKISTAN

1. To facilitate smooth conduct of the Study, the
Government of Pakistan shall take necessary measures;

- (1) To secure the safety of the Japanese study
team,
- (2) To permit the members of the Japanese study
team to enter, leave and sojourn in
Pakistan for the duration of their assignment
therein, and exempt them from alien,
registration requirements and consular fees,
- (3) To exempt the members of the Japanese study
team from taxes, duties, fees and other
charges on equipment, machinery and other
materials brought into Pakistan for the
conduct of the Study,
- (4) To exempt the members of the Japanese study
team from income tax and charges of any kind
imposed on or in connection with any
emolument or allowances paid to the members
of the Japanese study team for their
services in connection with the implementation
of the Study,
- (5) To provide the necessary facilities to the
Japanese study team for the remittance as
well as utilization of funds introduced into
Pakistan from Japan in connection with the
implementation of the Study,

- (6) To secure permission for entry into private properties or restricted area for the conduct of the Study, unless prohibited by laws/regulations,
- (7) To secure permission to take all data and documents related to the Study including photographs out of Pakistan to Japan by the Japanese study team, and
- (8) To provide medical services as needed. Its expense will be chargeable on the members of the Japanese study team.

2. The Government of Pakistan shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or wilful misconduct on the part of the members of the Japanese study team.

3. Ministry of Food, Agriculture and Cooperatives shall act as counterpart agency to the Japanese study team and also as coordinating body to other relevant organizations for the smooth implementation of the Study.

4. Ministry of Food, Agriculture and Cooperatives shall, at its own expense, provide the Japanese Study team with the following, in cooperation with other agencies concerned, if necessary.

- (1) available data and information related to the Study
- (2) counterpart personnel
- (3) suitable office with necessary equipment and furniture

VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

- (1) To dispatch, at its own expenses, the study team in accordance with the attached tentative work schedule, and
- (2) To pursue technology transfer to the Pakistan counterpart personnel in the course of the Study.

VIII. JICA and Ministry of Food, Agriculture and Cooperatives will consult with each other in respect of any matter that is not agreed upon in this document and may arise from or in connection with the Study.

8/2

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TENTATIVE WORK SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Field Work														
Home Office Work														
Draft Final Report Explanation														
Submission of Report														

▲ Inception Report ▲ Field Report ▲ Draft Final Report ▲ Final Report

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MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE MASTER PLAN STUDY
FOR
PADDY/RICE HANDLING AND PROCESSING IMPROVEMENT PROJECT

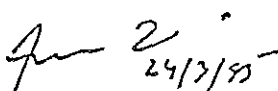
The Officials of the Ministry of Food, Agriculture and Cooperatives and JICA Preliminary Survey Team on the Master Plan Study for Paddy/Rice Handling and Processing Improvement Project (hereinafter referred to as "the Study") headed by Mr. K. Takeshita, held a series of meeting to discuss the details of the Scope of Work for the Study.

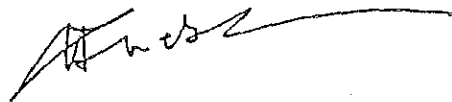
As a result of discussions, both sides agreed in principle on the Scope of Work, and confirmed the importance of the following items and recognized the necessity to make efforts to realize them.

1. The Study will be done in general and comprehensive manners, however, recommendation in the final report would be focussed on the farmers' side.
2. Undertakings mentioned in the Scope of Work, item VI-4-(3) should be carried out by Ministry of Food, Agriculture and Cooperatives.

However, in case Ministry of Food, Agriculture and Cooperatives encounters difficulties to provide the undertakings due to budgetary constraints, JICA may take appropriate measures.

Islamabad, March 24, 1985


ANWARUL HAQ RAAZI
Joint Secretary
Ministry of Food,
Agriculture & Cooperatives


HIROTO TAKESHITA
Leader of Preliminary Survey
Team
Japan International Cooperation

APPENDIX B

Personnel Concerned and Survey Site

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Appendix B-1 OFFICIALS CONCERNED OF FEDERAL GOVERNMENT AND
MEMBERS OF ADVISORY COMMITTEE AND STUDY TEAM

A. Officials Concerned of Federal Government

(1) Economic Affairs Division

Mr. F. I. Malik	Joint Secretary
Mr. Mohammad Fabeem	Deputy Secretary

(2) Ministry of Food, Agriculture and Cooperatives

Mr. Rafiq Ahmad Akund	Secretary
Mr. Anwal Haq Raazi	Joint Secretary*
Mr. Muhammad Tariq Janjua	Joint Secretary
Dr. Imtiaz Husain	Agricultural Development Commissioner
Dr. M. A. H. Qureshi	Rice Commissioner
Dr. Masuda Akhtar	Economic Consultant

(3) Pakistan Agricultural Storage and Service Cooperation

Major General Mohammad Akram	Managing Director
Mr. Kazi Gulzar Ahmad	Senior General Manager
Mr. Mohammad Yunis Durrandi	General Manager
Mr. Mukhtar Ali Baig	General Manager

B. Advisory Committee

Mr. H. Takeshita	Leader	Director-General's Secretariat, Food Agency, Ministry of Agriculture, Forestry and Fisheries
Mr. H. Watanabe	Member	Management Department, Food Agency, Ministry of Agriculture, Forestry and Fisheries
Mr. M. Hashimoto	Member	Agricultural Technology Training Center, Ministry of Agriculture, Forestry and Fisheries

C. Study Team

Mr. H. Komuro	Team Leader
Mr. Y. Matsumoto	Co-Team Leader Agro-Economist
Mr. T. Kusano	Project Economist
Mr. M. Yamada	Field Loss Assessment Expert I
Mr. H. Yoshino	Field Loss Assessment Expert II
Mr. K. Yamakawa	Agro-Machinery Expert
Mr. I. Yamazaki	Rice Processing Expert
Mr. T. Maruta	Transportation Expert
Mr. N. Tsuchihashi	Institutional Expert
Mr. H. Ikewada	Storage Expert

Appendix B-2

List of Survey Site for Field Losses Assessment

Sind Province

<u>Dist</u>	<u>Village</u>	<u>Farmer's Name</u>	<u>Remarks</u>
Larkana-1	Gulmohammed Khose	Mohammad Ayub Khoso Baloch	Owner Cultivator
" -2	Chundia Kalhora	Ali Hassan Abasi	"
" -3	Chibhur Shaikh	Haji Amir Bux	Tenant Farmer
Shikarpur-1	Goheja	Wali Mohammad Rind Baloch	Tenant Farmer
" -2	Laungani	Syed Soze Ali Shah	Owner Cultivator
" -3	Kabalo	Jaro Rajar	Tenant Farmer
Jacobabad-1	Bughio	Bahran Jakhrani	Tenant Farmer
" -2	Dilawar Pur	Mohammed Bachal Baloch	"
" -3	Khandil Khan	Sher Khan Jakhrani Baloch	"

Punjab Province

Sheikhupura-1	Oila Bhattian	Ghulam Nabi	Contract Farmer
" -2	Khanch Dogran	Sardar Zahur Ahmad	"
" -3	Karchpuru	Umar Hayat	"
Sialkot-1	Paharipur	Mohammad Ismial	Owner Cultivator
" -2	Adam Ke Cheema	Mohammad Bashir	"
" -3	Gujran	Munshi	"
Gujaranwala-1	Khot	Muhammad Siddique	Owner Cultivator
" -2	Talwara	Muhammad Khan	"
" -3	Khara	Faqir Muhammad	"

Appendix B-3

List of Rice Mills for Milling Losses Assessment

Code No.	General Classification of Rice Mill	Name of Rice Mill or Owner's Name	Town or Village	District
<u>Sind Province</u>				
S-1	Huller	Bukhshal Khan Abro	Dokri	Larkana
S-2	Huller	Muhammad Suleman Katpar	Dakri	Larkana
S-3	Semi-modern	Ratodero Rice Mill	Ratodero	Larkana
S-4	Semi-modern	Kashtkar Rice Mill	Larkana	Larkana
S-5	Sheller	Arija Rice Mill	Dokri	Larkana
S-6	Sheller	Abadgar Rice Mill	Larkana	Larkana
<u>Punjab Province</u>				
P-1	Huller	Ch. Sher Mohammad	Rattan Pura	Sheikhupura
P-2	Huller	Mehdi Hassan	No.45	Sheikhupura
P-3	Sheller	Popular Rice Mill	Kamoke	Sheikhupura
P-4	Sheller	Punjab Rice Mill	Daska	Sialkot
P-5	Semi-modern	Aziz Rice & General Mills	Kamoke	Sheikhupura
P-6	Semi-modern	Pak Rice Mills	Daska	Sialkot

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Appendix C-1

Sectoral Shares of GDP
(1949/50 to 1982/83)
(per cent)

	1949/50	1953/54	1957/58	1961/62	1965/66	1969/70	1973/74	1977/78	1980/81	1981/82	1982/83	1949/50 to 1982/83	Average Annual Growth Rate
1. Agriculture	53.2	49.8	46.7	43.7	37.1	36.9	35.2	32.1	30.7	30.0	29.7		3.059
2. Mining and Quarrying	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		7.801
3. Manufacturing	7.8	9.9	11.9	13.8	15.2	16.0	16.1	15.3	16.2	17.1	17.5		7.517
4. Construction	1.4	2.0	2.4	3.2	4.3	4.2	3.9	5.0	5.1	5.0	4.9		8.365
5. Electricity and Gas Distribution	0.2	0.2	0.4	0.5	0.8	2.0	2.8	2.8	3.2	3.1	3.2		13.747
6. Transport, Storage and Communication	5.0	5.4	5.6	5.5	6.7	6.5	6.5	4.5	7.0	7.1	7.0		5.984
7. Wholesale and Retail Trade	11.9	12.0	12.3	13.0	13.7	13.8	14.4	13.8	13.8	14.1	14.5		5.521
8. Banking and Insurance	0.4	0.5	0.7	1.0	1.4	1.8	2.3	2.8	2.4	2.5	2.5		10.552
9. Ownership of Dwellings	5.1	5.0	5.0	4.7	4.0	3.4	3.4	3.3	3.0	3.0	2.9		3.142
10. Public Administration and Defense	7.0	6.9	6.2	5.9	9.1	6.4	7.9	10.4	10.7	10.3	10.0		5.943
11. Services	7.8	8.0	8.4	8.2	7.2	6.7	7.0	7.4	7.4	7.3	7.3		4.729
12. Gross Domestic Product	100	100	100	100	100	100	100	100	100	100	100		4.890

Source: Strategies for Economic Growth and Development, ADB, 1985

Appendix C-2

Financial Allocation to the Agriculture Sector
(Rs Million)

	First Plan (1955- 60)	Second Plan (1960- 65)	Third Plan (1965- 70)	Non- Plan Period (1970- 78)	Fifth Plan (1978- 83)	Sixth Plan Alloc- ations (1983- 88)
A. Agriculture						
Government Storages	-	25	44	500	1445	3650
Agricultural Education	-	75	75	100	239	330
Agricultural Extension	25	50	30	100	421	1019
Agricultural Research	6	30	22	250	707	1560
Agricultural Marketing, Cooperatives and other supporting programmes	70	100	28	130	100	108
Agricultural Economics and Statistics	Neg.	2	2	25	40	51
Improved Seeds	25	30	28	160	424	497
Soils and fertilizers	-	6	10	50	99	172
Plant Protection	25	15	118	160	382	126
Mechanization	40	80	126	450	236	581
Soil Conservation and Land Development	200	140	160	110	342	405
Livestock and Poultry Development	20	40	42	314	573	1215
Forestry, Watershed Management and Wildlife	30	60	80	200	440	1571
Range Management	5	12	12	12	41	52
Fisheries	5	15	20	80	129	763
Miscellaneous	10	15	25	60	259	-
Public Corporations	-	-	-	-	190	250
Total	461	695	822	4,141	6,067	12,350
B. Fertilizer Subsidy						
	-	207	555	2,351	8,800	3,000

Source: Sixth Plan.

Appendix C-4

Value and Volume of Major Imports
(1972/73 to 1983/84)

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
Crude Oil												
Value (\$ Million)	45.0	105.1	216.7	255.0	273.8	341.9	307.7	591.7	994.0	1,143.0	1,013.0	925.0
Quantity ('000 tons)	2,477.0	2,835.7	2,535.4	2,790.1	2,710.8	3,314.8	2,945.8	4,619.2	3,955.0	4,412.0	4,305.0	4,344.0
Petroleum Products												
Value (\$ Million)	18.0	43.6	110.8	112.0	132.6	155.4	222.3	487.6	541.3	540.0	574.0	571.0
Quantity ('000 tons)	618.0	781.9	1134.3	1,062.8	1,127.4	1,281.6	1,676.5	1,817.0	1,663.3	1,604.0	1,897.0	2,302.0
Wheat Unmilled												
Value (\$ Million)	105.0	156.2	222.8	180.3	66.7	135.0	354.1	105.2	63.9	75.9	-	-
Quantity ('000 tons)	1,138.0	1,287.7	1,163.9	1,166.9	499.0	1,035.0	2,236.5	602.2	304.8	359.8	-	-
Fertilizers												
Value (\$ Million)	37.2	90.4	97.4	56.4	63.0	103.8	283.6	273.9	357.3	84.6	167.0	121.0
Quantity ('000 tons)	354.0	502.4	341.7	203.0	399.6	594.6	1,575.3	1,112.0	1,283.0	314.0	717.3	500.0
Edible Oil												
Value (\$ Million)	30.7	63.4	45.7	45.2	149.3	148.0	268.2	230.1	266.2	321.2	276.1	505.0
Quantity ('000 tons)	107.0	124.5	63.2	104.2	284.0	248.8	411.7	344.9	466.9	624.2	639.8	702.0
Tea												
Value (\$ Million)	31.0	34.6	57.0	62.2	75.9	127.1	101.0	96.3	119.6	103.4	131.4	181.0
Quantity ('000 tons)	38.0	37.8	50.7	52.3	51.1	60.9	61.1	60.9	72.5	69.5	81.2	94.0
Other Imports												
Value (\$ Million)	530.0	368.2	1,353.4	1,356.2	1,626.1	1,240.0	1,617.0	3,511.0	3,773.0	4,012.0	3,944.0	4,232.0
Total Imports												
Value (\$ Million)	797.2	861.4	2,103.8	2,067.3	2,387.4	3,039.0	4,154.0	5,286.0	6,056.0	6,280.0	6,105.0	6,535.0

Sources: IBRD, Pakistan Economic Development and Prospects, February 24, 1984.
Planning and Development Division, COP.

Appendix C-5
World Prices and Price Projections for Pakistan's Major Agricultural Commodities
(1983 Constant Dollars) ^{a/}

Commodity	Unit	A c t u a l											Average 1960-1970		
		1976	1977	1978	1979	1980	1981	1982	1983	Short Run		Long Run			
Sugar <u>b/</u>	\$/mt	349	226	185	206	564	352	178	187	113	128	182	315	270	234
Rice <u>c/</u>	\$/mt	348	344	396	320	387	454	281	277	262	230	233	339	327	489
Wheat <u>d/</u>	\$/mt	204	146	145	167	170	185	160	170	175	161	151	153	149	207
Cotton <u>e/</u>	\$/kg	231	197	169	163	183	173	153	185	184	170	171	173	175	200
Urea <u>f/</u>	\$/mt	153	161	156	167	198	203	152	135	176	186	210	250	260	212
TSP <u>g/</u>	\$/mt	124	124	106	138	161	152	133	135	135	147	155	170	170	45
DAP <u>h/</u>	\$/mt	164	168	157	187	198	183	175	184	195	212	228	290	294	386

^{a/} Computed from unrounded data and deflated by the Manufacturing Unit Index (MUV; 1983 = 100).

^{b/} Sugar (World), ISA daily price, FOB and stored at greater Caribbean ports.

^{c/} Rice (Thai), white, milled, 5% broken government standard, export price, FOB Bangkok.

^{d/} Wheat (Canadian), No. 1 Western Red Spring (WRS), in store, Thunder Bay.

^{e/} Cotton (Outlook "A" Index), Middling (1-3/32"), CIF N. Europe.

^{f/} Urea (any origin), bagged, FOB N.W. Europe.

^{g/} TSP (Triple Super Phosphate), bulk, FOB US Gulf.

^{h/} DAP (Diammonium Phosphate), bulk, FOB US Gulf.

Source: World Bank, Half Yearly Revision of Commodity Price Forecasts, December, 1984.

Appendix C-6

Total Population and Rural Population in Pakistan

Census Year	Total Population			Rural Population			(1)/(4) x 100
	Both Sexes (1)	Male (2)	Female (3)	Both Sexes (4)	Male (5)	Female (6)	
1951	33.740 a/	18.147	15.593	27.785	15.004	12.781	82.4
1961	46.100 b/	24.684	21.416	35.728	19.114	16.614	77.5
1971/72	65.309	34.833	30.476	48.716	25.806	22.910	74.6
1980/81	83.782	43.960	39.822	60.680	31.501	29.652	71.7
1984 mid.	96.000 c/			67.680 c/			70.5 c/

(Millions)

Annual Compound Rates of Growth (Per Cent)

1951/61	3.17	3.12	3.22	2.55	2.45	2.66
1961/72	3.22	3.18	3.26	2.86	2.77	2.96
1972/81	2.81	2.62	3.02	2.35	2.24	2.48
1951/81	3.08	2.99	3.17	2.60	2.50	2.71

a/ The Population Census (1951) figures updated to include population of the regions which became a part of Pakistan after 1951.

b/ According to an estimate developed by the Planning Commission of Pakistan, there was underenumeration in the 1961 census of about 7.5 per cent. The population figures for the said year reported in this table have been adjusted accordingly.

c/ Study Group estimate.

Source: Population Census of Pakistan, 1951, 1961, 1972 and 1981 and Pakistan Economic Survey (Various issues).

Appendix C-7

POPULATION OF MAJOR CITIES a/
(100,000 population and above in 1981)

Name	1981 Population (in thousand)	1951-1981 Average Annual Growth (per cent)
Karachi	5,208	5.4
Lahore	2,953	4.2
Faisalabad	1,104	6.3
Rawalpindi	795	4.1
Hyderabad	752	4.6
Multan	732	4.6
Gujranwala	601	5.5
Peshawar	566	4.5
Sialkot	302	2.0
Sargodha	291	4.5
Quetta	286	4.2
Islamabad	204	12.2 b/
Jhang	196	3.4
Sukkur	191	3.1
Bahawalpur	180	5.0
Kasur	156	3.1
Gujrat	155	4.1
Okara	153	5.0
Sahiwal	151	3.8
Mardan	148	3.8
Sheikhupura	141	5.3
Mirpur Khas	124	3.8
Larkana	124	4.5
Wah	122	4.5
Rahim Yar Khan	119	7.2
Chiniot	106	3.4
Nawabshah	102	3.7
D.G. Khan	102	3.5

a/ Census data (1981 unadjusted for under-enumeration). In view of census under-enumeration problems and problems associated with census definitions of urban areas these figures should be taken as broadly indicative only.

b/ 1972-1981.

Source: Strategies for Economic Growth and Development, ADB, 1985

Appendix C-8

Estimates of Labor Force

	1961	1971/72	1977/78	1982/83	July 1983 a/		
Census (excl. Frontier Region)	12,763	13,720	14,921	18,650	22,220	26,060	27,640
Planning Commission (excl. Frontier Region)							
Planning Commission (incl. Frontier Region)							
Total	12,763	13,720	14,921	18,650	22,220	26,060	27,640
Males	11,641	12,514	13,603	17,020	20,510	23,740	24,300
Females	1,122	1,206	1,318	1,630	1,710	2,320	3,340

a/ Sixth Plan estimate.

Source: ILO/ATEP, 1983.

Appendix C-9

Trends in the Occupational Distribution of the Labor Force

Occupation Group	Years											(Percentage)
	1951	1961	1968/69	1969/70	1970/71	1971/72	1973	1977/78	1980/81	1982	1983 ^{a/}	
Agricultural	65.3	59.6	53.6	55.9	56.6	56.2	58.6	56.6	55.9	52.6	51.9	
Mining and												
Manufacturing	9.8	13.7	15.7	15.3	15.0	12.6	9.23	13.4	13.6	9.7	14.9	
Construction and												
Public Utilities	1.8	2.3	3.9	4.1	3.8	3.7	4.6	4.6	4.7	4.8	6.4	
Transport	1.7	2.7	5.0	4.6	4.8	4.7	3.9	4.7	4.8	4.1	4.7	
Commerce	6.9	7.1	10.7	9.7	10.7	10.5	12.7	10.5	10.8	10.2	17.6	
Other Services	11.3	12.5	9.0	8.0	7.0	7.1	10.0	10.2	10.2	13.7	10.2	
Unallocation	3.2	2.2	2.2	2.2	1.9	5.0	1.0	-	-	4.9	3.0	

^{a/} Sixth Plan estimates.

- Sources:
- (i) Population Census of Pakistan, for 1951, 1961 and 1981;
 - (ii) Labour Force Survey, for the period 1968/69 to 1971/72;
 - (iii) Housing, Economic and Demographic Survey, for 1973; and
 - (iv) Manpower Division estimates for 1977/78 and 1980/81.

Appendix C-10

Sixth Plan Financial Allocation to the Agriculture Sector

	Fifth Plan (1978-83) (Rs million)	Sixth Plan (1983-88)		
		Allocations (Rs million)	Percentage Distri- bution	% Increase/ Decrease over Fifth Plan
A. <u>Agriculture</u>	<u>6,067</u>	<u>12,350</u>	<u>100.0</u>	<u>103.6</u>
Government storage	1,445	3,650	29.6	152.6
Agricultural education	239	330	2.7	38.0
Agricultural extension	421	1,019	8.3	142.0
Agricultural research	707	1,560	12.6	120.7
Agricultural marketing, cooperatives and other supporting programs	100	108	0.9	8.0
Improved seeds	424	497	4.0	17.2
Soil surveys	99	172	1.4	73.7
Plant protection	382	126	1.0	-67.0
Mechanization	236	581	4.7	146.2
Soil conservation and land development	342	405	3.3	18.4
Livestock and poultry development	573	1,215	9.8	112.0
Forestry, watershed management & wildlife	440	1,571	12.7	257.0
Range management	41	52	0.4	26.8
Fisheries	129	763	6.2	491.5
Others <u>a/</u>	489	301	2.4	-38.4
B. <u>Fertilizer Subsidy</u>	<u>8,800</u>	<u>3,000</u>	<u>100.0</u>	<u>-65.9</u>

a/ Includes the items "agricultural economics and statistics," "public corporations," and "miscellaneous."

Source: The Sixth Plan.

Appendix C-11

Agricultural Inputs in Pakistan
(1968/69 to 1978/79)

Year	Agricultural Value-Added (Million Rupees)	Land (Cultivated Area, Million Acres)	Agricultural Labor Force (Million)	Livestock (Million head)	Private Tube-wells (Number)	Public Tubewells (Number)	Tractors (Number)
1953/54	4,532	38.39	6.28	6.5	999	-	-
1954/55	4,320	37.86	6.33	6.1	1,300	-	437
1955/56	4,406	38.70	6.38	6.1	1,600	-	546
1956/57	4,502	39.56	6.77	6.3	1,900	-	804
1957/58	4,578	40.14	7.16	6.5	2,200	-	1,241
1958/59	4,882	40.04	7.55	6.7	3,300	-	1,598
1959/60	4,775	40.80	7.93	6.8	4,600	256	3,642
1960/61	4,709	44.76	8.97	6.9	8,000	1,264	4,192
1961/62	5,127	44.23	9.28	7.0	18,000	1,432	6,495
1962/63	5,486	44.55	9.59	7.5	18,400	2,052	8,943
1963/64	5,638	45.30	9.89	7.0	25,000	2,206	11,180
1964/65	6,018	46.26	10.05	7.5	31,600	2,206	12,593
1965/66	5,993	47.54	10.21	7.7	40,207	2,344	13,990
1966/67	6,421	47.60	10.35	7.9	51,327	2,626	17,753
1967/68	7,484	48.00	10.49	7.6	62,163	3,708	18,991
1968/69	7,924	47.67	10.41	7.3	72,149	5,216	22,420
1969/70	8,916	47.63	10.33	7.0	79,223	6,266	26,485
1970/71	8,463	47.47	10.73	7.9	89,157	6,527	28,535
1971/72	8,843	47.16	10.86	7.9	98,755	6,657	30,277
1972/73	8,951	47.23	10.98	8.0	109,541	7,384	29,879
1973/74	9,429	47.87	11.10	8.1	120,506	7,572	33,173
1974/75	9,134	48.29	11.22	8.2	144,271	8,097	37,877
1975/76	9,672	48.98	11.34	8.8	150,117	8,495	46,032
1976/77	9,864	48.81	11.46	8.4	156,910	10,120	58,047
1977/78	10,076	49.28	11.58	8.4	160,901	11,686	65,759
1978/79	10,545	49.79	11.70	8.5	166,948	11,535	76,269

Source: Wizarat, 1982.

Appendix C-12

Average Annual Growth Rates of Economy and Agriculture Sector
(1949/50 to 1982/83)
(per cent)

	Period I 1949/50-	Period II 1960/61-	Period III 1966/67-	Periods II-III 1960/61-	Period IV 1970/71-	Period V 1978/79-	Periods IV-V 1970/71-	Periods I-V 1949/50-
	1959/60	1965/66	1969/70	1969/70	1977/78	1982/83	1982/83	1982/83
GNP Economy	3.09	6.90	6.56	6.75	4.92	5.96	5.31	5.07
Population	2.46	2.84	2.90	2.86	3.00	2.95	2.98	2.79
Per Capita								
Gross Income	0.61	3.96	3.57	3.81	1.86	2.91	2.26	2.22
GDP Agriculture	1.58	3.21	7.78	5.01	1.68	4.41	2.72	3.06
Major Crops	1.25	3.68	1.88	6.88	0.90	4.79	2.38	3.38
Minor Crops	0.83	4.64	3.85	4.32	3.26	5.33	4.05	3.15
Livestock	2.76	1.91	2.00	1.94	2.31	4.04	2.97	2.44
Fishing	4.90	5.34	5.06	9.12	3.58	2.35	0.40	4.34
Forestry	8.99	0.15	6.99	5.54	2.39	6.10	3.81	2.84

Source: Strategies for Economic Growth and Development, ADB, 1985

Appendix C-13

Index of Total and Agricultural GDP per Capita
(1959/60 to 1982/83)

(1959/60 Rupees)

	GDP per Capita		Index (1959/60=100)		Ratio of Per Capita Agr'l. GDP to Total GDP
	Total Economy	Agriculture Sector	Total Economy	Agriculture Sector	
1959/60	373	171	100	100	100
1960/61	381	166	102	97	95
1961/62	393	172	105	101	96
1962/63	409	176	110	103	94
1963/64	424	175	114	102	89
1964/65	450	179	121	105	87
1965/66	471	175	126	102	81
1966/67	472	179	126	105	83
1967/68	490	195	131	114	87
1968/69	507	198	136	116	85
1969/70	542	211	145	123	85
1970/71	527	198	141	116	82
1971/72	518	199	139	116	83
1972/73	539	196	144	115	80
1973/74	564	199	151	116	77
1974/75	569	189	152	110	72
1975/76	571	192	153	112	73
1976/77	568	191	152	112	74
1977/78	592	190	158	111	70
1978/79	603	191	162	112	69
1979/80	628	198	168	116	69
1980/81	648	200	174	117	67
1981/82	671	202	180	118	66
1982/83 <u>a/</u>	709 <u>b/</u>	204 <u>c/</u>	190	119	63

a/ Provisional estimates only.

b/ Total GDP of Rs59,915 million, population of 87.46 million.

c/ Agricultural GDP of Rs17,826 million, population of 87.46 million.

Source: Cheong, 1983 and National Accounts of Pakistan.

Appendix C-14

Land Use
(1980)

	Area (Million ha)	Per cent
Cultivable Canal Command (cca)		
Designated perennial	8.17	10.3
Designated non-perennial	5.79	7.3
Cultivable waste within cca	<u>-2.02</u>	<u>-2.6</u>
Subtotal	11.94	15.0
Other Cultivated Areas		
Irrigated (wells, streams, karezes)	2.26	2.8
Barani (rainfed)	3.68	4.6
Sailaba (riverain)	1.25	1.6
Sailaba (torrent)	<u>1.13</u>	<u>1.2</u>
Subtotal	8.32	10.2
Total Cultivated Area	<u>20.26</u>	<u>25.2</u>
Range and Forest Land		
Range	8.62	10.8
Forest	<u>2.83</u>	<u>3.6</u>
Subtotal	11.45	14.4
Total Suitable for Agriculture and Forestry	31.71	39.6
Total Unsuitable for Agriculture and Forestry	<u>47.90</u>	<u>60.4</u>
Total Area of Pakistan	<u>79.61</u>	<u>100.0</u>

Source: Soil Survey of Pakistan and Planning Division of WAPDA.

Appendix C-15

Cultivable Waste, Land Use Intensity and Cropping Intensity
(1960, 1972 and 1980)

Farm Size <u>a/</u>	1960			1972			1980		
	Cultivable Waste as % of Farm Area	Land Use Intensity	Cropping Intensity	Cultivable Waste as % of Farm Area	Land Use Intensity	Cropping Intensity	Cultivable Waste as % of Farm Area	Land Use Intensity	Cropping Intensity
All Farms	16	76	103	10	83	111	13	89	122
Below 5 acres	8	86	116	3	92	133	4.3	96-97	144-164
5 to 7.5 acres	7	88	115	3	93	126	4.1	96	138
7.5 to 12.5 acres	8	88	111	4	93	119	5.5	95	129
12.5 to 25 acres	10	85	106	6	90	111	9.4	91	120
25 to 50 acres	16	78	98	10	84	103	14.6	87	113
50 to 150 acres	31	59	85	18	71	97	25.9	79	108
150 and above	49	35	57	27	46	88	45.9	69	100

a/ Computed in acres to facilitate comparison of Censuses.

Source: Calculated from Pakistan Censuses of Agriculture, 1960, 1972 and 1980.

Appendix C-16

Physical Achievements: Crop Production

Major Programmes	Unit	First Plan (1955-60)	Second Plan (1960-65)	Third Plan (1965-70)	Non-Plan Period (1970-78)	Fifth Plan (1978-83)	Sixth Plan Target (1983-88)
Grains	000 mt.	6,090	7,325	11,050	12,861	17,390	21,795
Wheat	" "	3,908	4,590	7,293	8,367	12,340	15,500
Rice	" "	995	1,350	2,401	2,950	3,440	4,200
Maize	" "	486	528	667	821	1,010	1,380
Others	" "	701	857	689	723	600	715
Cash Crops	" "	11,013	19,126	27,017	30,728	33,419	42,068
Cotton (lint)	" "	291	378	536	575	821	1,033
Sugarcane	" "	10,661	18,665	26,365	30,077	32,530	40,935
Tobacco	" "	61	83	116	76	68	100
Oil Seeds	" "	835	999	1,397	1,471	2,081	2,853
Cotton Seed	" "	582	756	1,072	1,150	1,642	2,066
Traditional	" "	253	243	325	321	415	437
Non-Traditional	" "	-	-	-	1	24	350
Pulses	" "	837	875	679	813	712	795
Gram	" "	608	671	506	620	500	582
Others	" "	229	204	173	193	212	213
Vegetables & Spices	" "	902	1,111	1,738	2,207	2,721	5,105
Onions	" "	106	183	244	325	475	800
Potatoes	" "	90	173	178	294	516	850
Others	" "	706	755	1,316	1,588	1,730	3,455
Fruits	" "	622	1,278	1,381	2,090	2,680	3,585

Note: The production figures in each Plan period relate to the terminal year.

Source: Sixth Plan.

Appendix C-17

Partitioning of Growth: The Yield and Area Effects
(1949-1983)

	Period I (1949/50-1959/60)		Period II (1960/61-1965/66)		Period III (1966/67-1969/70)		Period IV (1970/71-1977/76)		Period V (1978/79-1982/83)	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
A. Wheat ('000 mt)										
1. Cumulative Incremental Production (CIP)	4,813	100	1,226	100	9,001	100	3,961	100	13,854	100
2. CIP Due to:	2,312	50	645	53	2,350	26	(1,522)	(38)	4,133	30
(a) Area Effect	(5,973)	(123.5)	556	45	5,520	63	5,525	140	8,733	64
(b) Yield Effect	8,274	173.3	25	2	1,027	11	(42)	(1)	867	6
(c) Interaction Effect										
B. Rice ('000 mt)										
1. Cumulative Incremental Production (CIP)	684	100	1,241	100	2,029	100	658	100	1,660	100
2. CIP Due to:	667	97.5	324	26	609	30	(67)	(10)	662	40
(a) Area Effect	29	4	861	69	1,435	71	753	114	963	58
(b) Yield Effect	(12)	(2)	56	5	185	9	(28)	(4)	31	2
(c) Interaction Effect										
C. Cotton (Lint) ('000 mt)										
1. Cumulative Incremental Production (CIP)	633	100	450	100	389	100	540	100	581	100
2. CIP Due to:	445	70	109	24	175	45	334	62	421	73
(a) Area Effect	153	24	314	70	190	49	175	33	122	21
(b) Yield Effect	35	6	26	6	23	6	79	15	38	6
(c) Interaction Effect										
D. Sugarcane ('000 mt)										
1. Cumulative Incremental Production (CIP)	9,071	100	37,582	100	(253)	(100)	(17,583)	(100)	6,852	100
2. CIP Due to:	31,000	341	14,985	40	(2,765)	(1,093)	16,545	94	1,017	15
(a) Area Effect	(15,574)	(172)	17,564	47	2,724	1,077	(31,655)	(180)	5,564	81
(b) Yield Effect	(6,356)	(70)	5,033	13	(212)	(84)	(2,473)	(14)	289	4
(c) Interaction Effect										
E. Total Cultivated Area (ha)	1959/60		1965/66		1969/70		1977/78		1981/82	
1. Wheat area as % of total	14,686		15,544		16,774		18,490		19,300	
2. Rice area as % of total	33.2		33.2		37.1		34.4		36.8	
3. Cotton area as % of total	6.4		9.0		9.7		10.3		10.2	
4. Wheat, Rice, Cotton as % of total	7.6		10.0		10.5		10.0		11.5	
5. Major Crops as % of total	50.6		52.2		57.3		54.6		58.5	
	60.4		62.3		67.7		64.9		69.3	

Source: Based on World Bank Report, April 1980.

Appendix C-18

Area of Major Crops a/
(1949/50 to 1983/84)
('000 hectares)

	Total		Wheat		Total Rice		HYV Rice		Cotton (lint)		Maize		Sugar-cane		Rape/Mustard		Total Area of Major Crops		Total Cropped Area
	Wheat	HYV	Wheat	HYV	Rice	HYV	Rice	HYV	(lint)	Maize	Sugar-cane	Mustard	Rape	Major Crops	Major Crops	Area			
1949/50	4,183				933				1,110	401	219	367	6,248	12,546					
1959/60	4,678				1,204				1,343	482	397	561	8,865	14,686					
1960/61	4,639				1,181				1,293	480	388	499	8,480	13,962					
1961/62	4,923				1,214				1,396	473	444	451	8,901	14,771					
1962/63	5,022				1,186				1,374	459	531	494	9,066	14,933					
1963/64	5,019				1,286				1,471	500	477	475	9,228	14,852					
1964/65	5,318				1,356				1,467	486	503	488	9,618	16,244					
1965/66	5,155				1,393				1,561	542	597	442	9,690	15,544					
1966/67	5,344				1,409				1,620	554	649	460	10,036	16,400					
1967/68	5,983				1,419				1,785	608	504	542	10,841	16,940					
1968/69	6,160				1,555				1,745	616	541	442	11,059	16,236					
1969/70	6,229				1,622				1,755	648	620	479	11,353	16,774					
1970/71	5,977				1,503				1,733	640	636	510	10,999	16,608					
1971/72	5,797				1,456			728	1,957	633	552	562	10,957	16,596					
1972/73	5,971				1,480			647	2,010	645	533	534	11,173	16,930					
1973/74	6,113				1,512			669	1,845	632	645	536	11,283	18,280					
1974/75	5,812				1,604			631	2,031	614	673	451	11,185	17,370					
1975/76	6,111				1,710			666	1,852	620	700	470	11,463	18,020					
1976/77	6,390				1,749			678	1,865	624	788	519	11,935	18,210					
1977/78	6,360				1,899			852	1,843	656	822	412	11,992	18,490					
1978/79	6,687				2,026			1,015	1,891	650	752	433	12,439	19,300					
1979/80	6,924				2,035			964	2,081	701	718	409	12,868	19,280					
1980/81	6,984				1,933			841	2,108	769	825	417	13,036	19,220					
1981/82	7,223				1,976			872	2,214	739	947	386	13,372	19,300					
1982/83	7,398				N.A.			N.A.	2,263	790	912	385	13,528	N.A.					
1983/84	7,298				2,020			N.A.	2,277	798	905	N.A.	N.A.	N.A.					

a/ Data for 1983/84 are provisional.

Source: Based on data provided by Planning and Development Division, GOP.

Appendix C-19

Production of Major Crops
(1949/59 to 1984/85)
('000 mt)

	Total Wheat	HYV Wheat	Total Rice	HYV Rice	Cotton (lint)	Maize	Sugar- cane	Rape/ Mustard
1949/50	3,924		805		220	407	7,849	145
1959/60	3,909		995		292	495	10,662	239
1960/61	3,814		1,030		301	439	11,641	214
1961/62	4,027		1,227		324	488	14,357	205
1962/63	4,170		1,095		366	489	18,439	257
1963/64	4,162		1,192		419	526	16,140	211
1964/65	4,591		1,350		378	528	18,668	214
1965/66	3,916		1,317		414	540	22,309	182
1966/67	4,335		1,365		463	587	21,982	203
1967/68	6,418		1,499		518	792	18,660	274
1968/69	6,618		2,032		528	626	21,971	229
1969/70	7,294		2,401		536	668	26,370	255
1970/71	6,476		2,200		542	718	23,167	269
1971/72	6,890		2,262		707	705	19,963	301
1972/73	7,442	5,559	2,330	1,255	702	706	19,947	287
1973/74	7,629	5,729	2,455	1,299	659	767	23,911	292
1974/75	7,674	6,104	2,314	1,107	634	747	21,242	248
1975/76	8,691	6,966	2,618	1,290	514	803	25,547	267
1976/77	9,144	7,905	2,737	1,316	435	764	29,523	296
1977/78	8,367	7,107	2,950	1,671	575	821	30,077	236
1978/79	9,950	8,534	3,272	1,949	473	799	27,326	248
1979/80	10,857	9,580	3,216	1,958	728	875	27,498	247
1980/81	11,475	10,308	3,123	1,797	684	946	32,359	253
1981/82	11,304	N.A.	3,430	2,021	748	930	36,580	238
1982/83 <u>a/</u>	12,414	N.A.	3,445	N.A.	823	1,006	32,534	240
1983/84 <u>b/</u>	10,936	N.A.	3,473	N.A.	510	N.A.	34,502	N.A.
1984/85 <u>c/</u>	13,000	N.A.	3,500	N.A.	572	N.A.	33,640	N.A.

a/ Revised estimates.
b/ Provisional.
c/ Target.

Source: Strategies for Economic Growth and Development, ADB, 1985

Appendix C-20

Yield Per Hectare of Major Crops
(1949/50 to 1982/83)
(kg/ha)

	Total Wheat	HYV Wheat	Total Rice	HYV Rice	Cotton (lint)	Maize	Sugar- cane	Rape/ Mustard
1949/50	938	N.A.	862	N.A.	198	1,014	35,840	395
1959/60	801	N.A.	826	N.A.	217	1,026	26,856	426
1960/61	822	N.A.	872	N.A.	232	914	30,002	428
1961/62	817	N.A.	1,010	N.A.	232	1,031	32,335	454
1962/63	830	N.A.	923	N.A.	266	1,065	34,725	520
1963/64	829	N.A.	926	N.A.	284	1,052	33,836	444
1964/65	863	N.A.	995	N.A.	257	1,086	37,113	438
1965/66	759	N.A.	945	N.A.	265	996	37,368	411
1966/67	811	N.A.	968	N.A.	285	1,059	33,870	441
1967/68	1,072	2,333 a/	1,056	N.A.	290	1,302	37,023	505
1968/69	1,074	1,660 a/	1,306	2,121 a/	302	1,016	40,611	518
1969/70	1,170	1,771 a/	1,480	2,057 a/	305	1,030	42,532	532
1970/71	1,083	1,530 a/	1,463	1,928 a/	312	1,121	36,426	527
1971/72	1,188	1,604 a/	1,553	1,937 a/	361	1,113	36,164	535
1972/73	1,245	1,651	1,577	1,946 a/	349	1,094	37,424	537
1973/74	1,245	1,651	1,623	1,909 a/	357	1,213	37,071	544
1974/75	1,319	1,642	1,439	1,725 a/	312	1,216	31,563	549
1975/76	1,420	1,734	1,531	1,937	277	1,295	36,495	568
1976/77	1,431	1,719	1,565	1,942	233	1,224	37,465	570
1977/78	1,316	1,517	1,553	1,961	311	1,251	36,590	572
1978/79	1,488	1,675	1,615	1,919	250	1,229	36,337	572
1979/80	1,568	1,715	1,581	2,031	349	1,248	38,298	603
1980/81	1,643	1,798	1,616	2,136	324	1,230	39,223	606
1981/82	1,567	N.A.	1,736	2,315	337	1,258	38,627	616
1982/83	1,695	N.A.	1,724	N.A.	361	1,311	37,611	N.A.

a/ Based on World Bank, April 1980, op cit, page 17.

Source: Strategies for Economic Growth and Development, ADB, 1985

Appendix C-21

Trends in Net Returns per Hectare for Major Crops
(1971 to 1981)
(Rupees)

Fiscal Year	Wheat (Mexi-Pak)	Rice Basmati	Paddy Coarse	Cotton (American)	Sugarcane
<u>Average Farmer, Pakistan a/</u>					
1970	133	104	20	79	462
1976	640	509	297	232	828
1978	477	148	208	479	1,369
1979	413	516	484	932	252
1980	484	393	593	1,109	1,794

<u>Average Leading Farmer, Punjab b/</u>					
1975	845	1,747	1,631	1,226	1,554
1976	919	1,127	1,396	1,732	2,006
1977	983	1,137	1,332	1,562	2,081
1978	892	1,060	1,268	2,372	2,449
1979	1,408	1,460	1,228	2,488	1,905
1980	2,701	1,861	1,132	3,249	4,581
1981	2,960	2,246	1,453	2,898	5,525

a/ "Average farmer" data were obtained from farmers selected by a multi-stage sampling design with districts, villages and farmers making up the sampling units from each stage. The FY1976 data came from 1,209 farmers located in 152 villages and 10 districts.

b/ "Average leading farmers" are those who possess land holdings generally between 12.5 acres and 25 acres. Generally such farmers produce marketable surpluses of agricultural commodities.

Source: Food and Agriculture Division, Ministry of Food and Agriculture; Survey Reports of Cost of Production of Major Crops.

Appendix C-22

Procurement Prices Received by Farmers
(Rs per Unit)

Year	Wheat		Basmati Paddy		Basmati Rice		IRRI Paddy		IRRI Rice		Cotton BSS7(Seed)		Sugar Cane a/	
	Price	per mt	Price	per mt	Price	per mt	Price	per mt	Price	per mt	Price	per mt	Price	per mt
	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg	per 40kg
1974/75		NF	NF	NF	1,233	45.30	NF	NF	563	22.51	NA	NA	113.75	4.55
1975/76		NF	NF	NF	1,608	64.30	NF	NF	724	28.94	NA	NA	113.75	4.55
1976/77		NF	NF	NF	2,411	96.45	NF	NF	1,072	42.87	NA	NA	127.25	5.09
1977/78		NF	NF	NF	2,411	96.45	NF	NF	1,072	42.87	NA	NA	154.0	6.16
1978/79	991	36.64	NF	NF	2,411	96.45	NF	NF	1,072	42.87	3,617	144.68	154.0	6.16
1979/80	1,206	48.20	1,608	64.30	2,947	117.89	804	32.15	1,501	60.02	3,992	159.68	154.0	6.16
1980/81	1,250	50.0	1,608	64.30	2,947	117.89	804	32.15	1,501	60.02	3,992	159.68	187.5	7.50
1981/82	1,450	58.0	1,875	75.0	3,425	137.0	965	38.58	1,900	72.0	4,275	171.0	241.25	9.65
1982/83	1,450	58.0	2,125	85.0	3,750	150.0	1,225	49.0	2,075	83.0	4,450	178.0	241.25	9.65
1983/84	1,600	64.0	2,200	88.0	3,650	154.0	1,275	51.0	2,075	83.0	4,575	183.0	241.25	9.65
1984/85	1,600	64.0	2,250	90.0	3,938	157.50	1,275	51.0	2,075	83.0	4,650	186.0	241.25	9.65

a/ Punjab.

Source: Agricultural Prices Commission.

Appendix C-23

Ratios of Wholesale Price Indices for Agriculture to the
Wholesale Price Index for Manufacturers a/
(1970 to 1982)

Fiscal Year	Food	Raw Materials	Wheat	Rice	Sugar	Cotton	Meat	Vegetables
1970	100	100	100	100	100	100	100	100
1971	102	105	100	95	96	118	115	130
1972	105	103	111	97	90	125	114	102
1973	106	114	100	128	105	133	111	91
1974	112	113	96	125	114	150	120	229
1975	124	109	127	123	121	115	142	130
1976	119	113	112	122	121	125	145	132
1977	118	112	98	123	108	142	142	178
1978	123	114	108	135	104	157	147	160
1979	120	123	112	114	97	178	142	143
1980	118	113	99	101	86	142	140	140
1981	115	113	95	110	111	140	149	132
1982	129	114	110	121	126	144	N.A.	N.A.

a/ For all wholesale price indices, FY1970=100.

Source: Ministry of Finance, Planning and Economic Affairs, GOP.

Appendix C-24

Ratio of Crop Price Indices to
Agricultural Input Price Indices
(1971 to 1982)
(FY1960 = 100)

	Rice	Wheat	Cotton	Sugarcane	Major Crops	All Crops
<u>Seed</u>						
1971	1.23	1.02	1.48	0.47	1.68	1.50
1972	1.09	1.01	1.39	0.62	1.04	1.07
1973	1.07	0.86	1.29	0.58	0.90	0.97
1974	1.13	0.88	1.21	0.52	0.93	0.99
1975	0.95	1.04	0.82	0.43	0.89	0.93
1976	1.09	1.01	1.06	0.57	0.97	1.01
1977	1.11	0.93	1.30	0.56	0.94	1.00
1978	0.93	1.08	1.18	0.50	0.97	1.01
1979	0.94	1.00	1.54	0.48	0.99	1.02
1980	0.95	0.98	1.32	0.53	1.00	1.02
1981	0.97	0.91	1.30	0.60	0.97	1.01
1982	1.01	0.98	1.26	0.62	1.00	1.04
<u>Fertilizer</u>						
1971	0.61	0.51	0.74	0.24	0.84	0.75
1972	0.62	0.57	0.79	0.35	0.59	0.61
1973	1.02	0.82	1.23	0.55	0.86	0.93
1974	1.13	0.88	1.21	0.52	0.94	0.97
1975	0.96	1.06	0.83	0.44	0.91	0.94
1976	1.21	1.13	1.18	0.64	1.08	1.13
1977	1.36	1.14	1.61	0.69	1.16	1.23
1978	1.32	1.52	1.67	0.70	1.37	1.42
1979	1.49	1.58	2.45	0.76	1.58	1.62
1980	1.45	1.51	2.02	0.81	1.52	1.56
1981	1.25	1.17	1.67	0.77	1.25	1.30
1982	1.13	1.09	1.40	0.69	1.11	1.16
<u>Water</u>						
1971	0.68	0.56	0.82	0.26	0.93	0.82
1972	0.64	0.59	0.81	0.36	0.62	0.63
1973	0.70	0.57	0.85	0.38	0.59	0.64
1974	0.86	0.67	0.93	0.40	0.72	0.74
1975	0.96	1.05	0.83	0.44	0.90	0.94
1976	0.97	0.90	0.94	0.51	0.86	0.90
1977	1.17	0.98	1.38	0.60	1.00	1.06
1978	0.82	0.95	1.04	0.44	0.85	0.88
1979	0.92	0.98	1.51	0.47	0.97	1.00
1980	0.82	0.85	1.14	0.46	0.86	0.88
1981	0.88	0.82	1.18	0.55	0.89	0.92
1982	0.83	0.80	1.03	0.50	0.82	0.85
<u>All Inputs</u>						
1971	0.79	0.66	0.94	0.30	1.08	0.96
1972	0.72	0.67	0.92	0.41	0.69	0.71
1973	0.86	0.70	1.04	0.47	0.72	0.78
1974	1.05	0.82	1.13	0.49	0.87	0.90
1975	0.95	1.05	0.83	0.44	0.90	0.93
1976	1.07	0.99	1.04	0.56	0.95	0.99
1977	1.13	0.95	1.34	0.57	0.97	1.02
1978	1.02	1.17	1.28	0.54	1.05	1.08
1979	1.08	1.14	1.78	0.55	1.14	1.17
1980	1.12	1.16	1.55	0.62	1.17	1.20
1981	1.07	1.00	1.43	0.66	1.07	1.11
1982	1.05	1.02	1.31	0.64	1.04	1.08

- Notes:
1. Price deflators for crops are for gross output.
 2. Input deflators for seed, fertilizer and water are for major crops only. Deflators for individual crops are not available.
 3. Includes both major and minor crops. Inputs are seed, fertilizer, pesticides, water, transport charges and wastage.

Sources: Statistics Division, Government of Pakistan, National Accounts, 1978/79-1981/82; 1977/78-1980/81; 1975/76-1978/79; 1973/74-1976/77; 1971/72-1974/75; 1969/70-1972/73.

Appendix C-25

Retail Prices to Farmers of Fertilizer Products
(Rs per 50 kg bag)

Effective Date	Urea 46% N	AN/CAN 26% N	ASN 26% N	AS 21% N	RP 11:52	NP 20:20	NP 23:23	NP 24:24	SSP 18% P	TSP 46% P	DAP 18:46	HAP 11:52	SOP 30% K	10:20:20	13:13:21	15:15:15	20:20:10	NPK	
8-6-66	25.00	11.00	14.00	11.00	-	20.00	-	-	10.00	19.00	-	-	-	-	-	-	-	-	-
29-8-66	26.00	11.50	14.50	11.50	-	21.00	-	-	9.50	20.00	28.00	-	19.00	-	-	-	-	-	-
27-5-69	26.00	13.00	14.50	13.00	-	21.00	-	-	9.50	20.00	28.00	-	20.00	-	-	-	-	-	-
29-6-70	28.50	17.00	18.00	17.00	-	21.00	-	-	9.50	20.00	28.00	-	20.00	-	-	-	-	-	-
25-9-72	35.00	17.00	18.00	17.00	-	21.00	-	-	9.50	20.00	35.00	-	20.00	-	-	-	-	-	-
30-1-73	35.00	17.00	18.00	17.00	-	35.00	-	-	9.50	20.00	35.00	-	20.00	-	-	-	-	-	-
30-3-73	41.00	20.00	23.00	20.00	-	35.00	40.00	-	11.00	26.00	44.00	-	25.00	-	-	-	-	-	-
11-8-73	55.00	32.00	31.00	25.00	-	35.00	55.00	-	15.00	34.00	57.00	-	32.00	-	-	-	-	-	-
20-8-74	75.00	43.00	43.00	34.00	-	56.00	65.00	-	22.00	55.00	75.00	-	32.00	-	-	-	-	-	-
29-1-75	75.00	43.00	43.00	34.00	-	56.00	55.00	57.00	22.00	55.00	75.00	70.00	32.00	-	-	-	-	50.00	-
9-5-75	75.00	43.00	43.00	34.00	-	48.00	55.00	57.00	22.00	55.00	75.00	70.00	32.00	-	-	-	-	50.00	-
16-4-76	68.00	39.00	43.00	31.00	68.00	45.00	50.00	52.00	18.00	46.00	72.00	64.00	32.00	-	-	-	-	47.00	-
20-4-78	68.00	39.00	43.00	31.00	68.00	45.00	50.00	52.00	18.00	46.00	72.00	64.00	29.00	-	-	-	-	47.00	52.00
17-10-78	63.00	36.50	-	29.00	63.00	42.00	46.50	48.50	17.00	43.00	67.00	59.50	27.00	-	-	-	-	44.00	-
1-1-79	63.00	36.50	-	28.00	-	-	46.50	-	17.00	-	67.00	-	27.00	42.50	-	-	-	-	-
25-2-80	93.00	50.00	-	42.00	-	-	78.00	-	25.00	-	100.00	-	30.00	42.50	-	-	-	-	-
13-4-80	93.00	50.00	-	42.00	-	-	78.00	-	25.00	-	100.00	-	30.00	63.00	-	-	-	-	-
27-10-81	93.00	50.00	-	42.00	-	-	78.00	-	25.00	-	100.00	-	30.00	63.00	60.00	-	-	-	-
15-3-82	103.00	55.00	-	47.00	-	-	84.00	-	25.00	-	105.00	-	30.00	65.00	63.00	-	-	-	-
6-10-82	118.00	58.00	-	54.00	-	-	97.00	-	29.00	-	121.00	-	35.00	75.00	72.00	-	-	-	-
11-6-83	128.00	60.00	-	59.00	-	-	110.00	-	37.00	95.00	133.00	-	40.00	82.00	79.00	-	-	-	-
									Powder										
									Granular	46.00									

2/ Prices were lowered by 12.5 per cent for six weeks from 19-12-74 to 1-2-75.

Source: Ministry of Food, Agriculture and Cooperatives and Joint Chief Controller of Prices, Ministry of Industries, and Agricultural Prices Commission.

Appendix C-26

Water Charges for Major Crops in Selected Areas
(1966 to 1979)
(Rupees per acre/feet)

Crop	SCARP Areas			Canal & Tubewell Water Supply		
	FY1966	FY1970	FY1979	FY1966	FY1970	FY1979
Wheat	14.40	20.80	26.00	7.20	10.40	13.00
Cotton	24.00	32.00	40.00	2.00	16.00	20.00
Rice	22.40	33.72	42.15	1.20	16.86	21.08
Sugarcane	48.00	71.20	89.00	4.00	35.60	44.50
Maize	17.28	19.20	24.00	8.64	9.60	12.00
Oilseeds	17.60	20.80	26.00	8.80	10.40	13.00

Source: Chaudhary, M.A. and M.M. Ashraf, "A Study of the Level and Structure of Agricultural Pricing and Taxation with Particular Reference to Water Charges," PIDE, March 1980.

Appendix C-27

Financial Outlays for Water Resources Development
(Rs Million)

	First Plan (1955- 60)	Second Plan (1960- 65)	Third Plan (1965- 70)	Non-Plan Period (1970- 78)	Fifth Plan (1978- 83)	Sixth Plan (1983- 88)
IBP/Tarbela	-	2,910	3,000	6,022	5,552	2,690
Irrigation	455	860	277	2,142	3,697	10,919
Drainage & Reclamation	97	422	832	3,122	4,003	13,815
Flood Protection	68	118	21	2,214	1,209	1,867
Water Management	-	-	-	88	555	1,060
Survey, Investigation, Research and Miscellaneous	<u>349</u>	<u>287</u>	<u>383</u>	<u>824</u>	<u>751</u>	<u>1749</u>
Total	969	4,597	4,513	12,810	15,767	32,100

Source: Sixth Plan.

Appendix C-28

Agricultural Credit Disbursed (All Pakistan)
(1960/61 to 1983/84)
(Rs Million)

Year	Agricultural Development Bank of Pakistan	Taccavi	Cooperatives	Commercial Banks	Total
1960/61	30.90	14.80	58.08	-	103.78
1961/62	42.70	12.20	92.91	-	147.81
1962/63	40.70	9.80	82.83	-	133.33
1963/64	46.70	12.00	70.34	-	129.04
1964/65	40.50	30.50	56.54	-	127.54
1965/66	68.00	12.70	51.72	-	132.42
1966/67	100.50	11.20	83.45	-	195.15
1967/68	106.20	13.00	59.46	-	178.66
1968/69	82.10	12.20	47.38	-	141.68
1969/70	91.30	10.60	53.45	-	155.35
1970/71	92.70	10.20	55.48	-	158.38
1971/72	80.00	8.92	39.08	-	128.00
1972/73	168.80	10.23	42.02	85.70	306.75
1973/74	415.20	67.50	143.72	286.40	912.82
1974/75	395.50	12.13	81.54	520.90	1,010.07
1975/76	532.20	25.67	91.84	808.10	1,457.81
1976/77	637.90	13.14	95.45	970.10	1,716.59
1977/78	429.80	9.00	138.04	1,290.92	1,867.76
1978/79	416.94	11.96	413.78	1,381.11	2,223.79
1979/80	711.55	8.20	708.64	1,587.40	3,015.79
1980/81	1,066.62	8.30	1,126.25	1,826.77	4,027.94
1981/82	1,557.38	10.34	1,100.80	2,436.10	5,104.62
1982/83	2,310.44	2.69	1,320.93	2,680.89	6,314.95
1983/84 a/	3,049.00	11.00	2,287.00	3,618.00	8,965.00

Growth Rates (%)

1960/61 to					
1982/83	21.4	-7.4	15.1	-	20.5
1970/71 to					
1982/83	30.6	-10.5	30.1	-	35.8
1975/76 to					
1982/83	22.8	-27.1	45.2	18.7	22.8

a/ Study Group estimate.

Source: Ministry of Food, Agriculture and Cooperatives, State Bank of Pakistan and Planning and Development Division.

Appendix C-29

Taxes and Subsidies in the Agriculture Sector
(1974/75 to 1982/83)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83 ^{a/}
<u>Taxes</u>	<u>1,865</u>	<u>1,432</u>	<u>896</u>	<u>814</u>	<u>1,080</u>	<u>1,710</u>	<u>1,606</u>	<u>1,757</u>	<u>1,286</u>
Export Duties:									
Rice	333	241	58	-	-	-	-	-	-
Raw Cotton	535	340	1	-	-	-	500	150	462
Profits of Export Corporations:									
Rice (RECP)	769	591	39	504	789	538	530	377	348
Cotton (CECP)	-	-	662	185	-	-	350	-	-
Land Revenue	228	260	136	125	291	172	226	230	219
Ushr	-	-	-	-	-	-	-	-	257
<u>Subsidies</u>	<u>515</u>	<u>1,043</u>	<u>728</u>	<u>1,147</u>	<u>2,222</u>	<u>3,084</u>	<u>3,119</u>	<u>2,601</u>	<u>2,359</u>
Fertilizer	326	607	87	617	1,692	2,454	2,457	1,819	1,600
Plant Protection	112	241	421	347	267	218	62	-	-
Tubewells	16	43	48	37	24	22	20	24	24
Wheat Seeds	-	6	6	25	8	29	2	8	8
Net Irrigation Cost ^{b/}	61	146	166	121	231	361	578	750	727
<u>Net Taxes ^{c/}</u>	<u>1,350</u>	<u>389</u>	<u>168</u>	<u>-333</u>	<u>-1,142</u>	<u>-1,374</u>	<u>-1,513</u>	<u>-844</u>	<u>-1,073</u>

^{a/} Revised estimates.

^{b/} Operations and maintenance costs less water charges.

^{c/} Taxes less subsidies.

Source: Planning and Development Division and World Bank estimates.

Appendix C-30

Livestock Population of Pakistan a/
('000 head)

	Punjab	Sind	NWFP	Balu- chistan	Pakistan
Cattle					
Stud bulls	20	23	5	5	54
Draft bulls and bullocks	3,545	1,279	448	267	5,538
Males 1 - 3 years	696	164	126	42	1,029
Males 0 - 1 year	726	213	150	52	1,142
Cows in milk	1,914	636	420	155	3,127
Dry cows	945	290	200	60	1,496
Heifers 1 - 3 years	679	151	108	27	966
Heifers 0 - 1 year	709	207	138	37	1,092
Total Cattle	9,236	2,966	1,595	646	14,444
Buffaloes					
Stud buffalo bulls	29	8	3	0.2	40
Draft buffaloes (males)	124	11	28	0.4	164
Males 1 - 3 years	283	64	35	2	385
Males 0 - 1 year	975	179	59	3	1,216
Buffaloes in milk	3,445	723	262	12	4,442
Dry buffaloes	1,358	272	75	3	1,708
Females 1 - 3 years	1,234	175	58	2	1,469
Females 0 - 1 year	1,230	235	67	2	1,533
Total Buffaloes	8,679	1,668	588	23	10,957
Sheep					
Males	323	82	40	284	729
Females	4,356	827	430	1,951	7,563
Lambs	1,619	273	192	920	3,004
Total Sheep	6,297	1,182	662	3,155	11,296
Goats					
Dwarf (Teddy): male	129	32	17	48	227
female	1,434	241	49	144	1,867
Others: male	329	118	161	406	1,013
female	2,815	1,756	571	2,092	7,234
Kids	2,596	878	356	1,034	4,864
Total Goats	7,303	3,026	1,153	3,723	15,205
Camels	358	119	48	171	696
Equines	1,416	354	220	193	2,184
Chickens					
Cockerals	1,272	414	662	148	2,456
Layers	6,757	1,265	2,379	439	10,841
Improved layers	2,713	1,940	95	165	4,913
Broilers	792	561	60	63	1,476
Chicks	4,996	2,004	2,294	830	10,124
Total Chickens	16,530	6,184	5,451	1,646	29,811
Ducks	425	40	37	6	508

a/ Excludes livestock on government farms and tribal areas of NWFP.

Source: Agriculture Census of Pakistan, 1980.

Appendix C-31

Tractors Imported

Year	Annual Number	Cumulative	Year	Annual Number	Cumulative
1965/66	1,665		1974/75	7,190	49,586
1966/67	4,113		1975/76	10,809	60,395
1967/68	2,182		1976/77	15,554	75,949
1968/69	4,411	21,534	1977/78	11,902	87,851
1969/70	5,696	27,230	1978/79	15,178	103,029
1970/71	3,879	31,109	1979/80	19,313	122,342
1971/72	4,224	35,333	1980/81	16,137	138,479
1972/73	1,847	37,180	1981/82	18,858	157,337
1973/74	5,216	42,586			

Source: Pakistan Economic Survey, 1981/82, Agricultural Statistics of Pakistan, 1982; 1983.

SPECIFICATIONS OF REAPER

1. MAKER	Kubota Ltd. Head Office, 2-47 Shikitsuhigashi 1-chome Naniwa-ku OSAKA, JAPAN
2. MODEL	AR 120
3. TYPE	Self Propelled
4. DIMENSIONS:	
a) Overall length	1840 mm
b) Overall width	1470 mm
c) Height up to handle	900 mm
5. WEIGHT	105 kg
6. WORKING CAPACITY	3-4 hr/hact
7. APPLICABLE PLANT HEIGHT	600-1200 mm
8. CROP RELEASE	Right side of machine (viewed from rear)
9. ENGINE	
a) Model	GS 130-2C
b) Type	4 stroke air cooled
c) Maximum output	3.4 PS (hp)
d) Fuel	Regular Gasoline
e) Fuel consumption	330 gm/ps/hr (at rated speed)
f) Fuel tank capacity	3.0 lit
10. TRAVEL SPEED	
a) Forward	58.8 m/min.
b) Reverse	50.4 m/min.
11. APPLICABILITY	Dry field to wet field
12. OPERATION & CONTROL	
a) Main clutch	Dog clutch
b) Harvesting clutch	Dog clutch
c) Height adjustment of handle	700-900 mm
13. APPLICABILITY TO INCLINED CROP PLANT	Upto 30° of inclined angle
14. CUTTING	
a) Cutting device	Reciprocating knifebar
b) Cutting height	Adjustable 60-300 mm
c) Cutting width	1200 mm
15. SIDE DELIVERY	
a) Upper delivery device	Revolving chain with lug plate
b) Lower delivery device	Revolving chain with lug plate

SPECIFICATIONS OF LOCAL THRESHER

SPECIFICATIONS

Power Source	: 35-65 hp. tractor with standard 540 rpm PTO shaft.
Power transmissions	: Direct coupling of thresher input shaft with tractor PTO shaft. The thresher input shaft drives the threshing drum through multiple V-Belts. This arrangement permits safer operation without any danger to tractor transmission or PTO shaft.
Construction	: All steel
Threshing	: 69 cm. diameter and 150 cm. length.
Cylinder details.	
a) Threshing Section	: Equipped with 1.8 cm. dia. pegs mounted spirally.
b) Separating Section	: Equipped with flat knives arranged spirally.
Concave	: Steel rods 0.63 cm. dia. with 1.9 cm. spacing in the threshing area and 2.22 cm. spacing in the separating area.

THRESHER COMPONENT SPEED

Component	Wheat	Rice
Threshing Cylinder	600-620 rpm	450-500 rpm
Oscillating Tray	350 rpm	350 rpm
Threshing performance		
Dwarf paddy		750-1100 Kg/hr.
Basmati and tall paddy varieties.		550- 750 Kg/hr.
Wheat with Bhoosa making.		550- 750 Kg/hr.
Cleaning		98 to 99%
Efficiency		
Grain loss		1 to 2%
Dimensions:		
Length		396.2 cm
Width (feed tray folded)		157.5 cm
Weight		1445 Kg.
Height		175.3 cm

SPECIFICATIONS OF AUTO COMBINE

Type	4-5 row Combine Harvester
Dimensions	
Length	3,890 mm
Width	1,675 mm
Height	1,800 mm
Weight	1,750 kg.
Working capacity	0.2 - 0.3 ha/hr (0.5 - 0.75 acre/hr)
Engine	
Type	Water cooled, 4-cycle Diesel Engine
No. of Cylinders	3
Output	26 HP/2, 400 rmp
Displacement	1,281 cc.
Fuel Tank capacity	32 lit.
Reaping Section	
Reaping Width	1,351 mm
Cutting Method	Reciprocating knif Bar.
Reaping Section Lifting	Hydraulic.
Threshing Section	
Threshing Drum Diameter	420mm
Threshing Drum Length	720mm
Re-threshing Drum Diameter	140mm
Re-threshing Drum Length	565mm
Cleaning System	Shaking pan, Variable angle crosspiece and Winnowing
Driving Section	
Type	Endless Rubber Crawler
Crawler Width	400 mm
Crawler Tread (Center to Center)	1,000 mm
Steering System	Clutch and hydraulic wet multi-plate disk.
Transmission	Hydraulic power shift non-clutch 12-forward, 4-reverse.

Travelling Speed

Forward	L x 1	0.24 m/sec.
	L x 2	0.36 "
	L x 3	0.48 "
	M x 1	0.39 "
	M x 2	0.60 "
	M x 3	0.79 "
	H x 1	0.61 "
	H x 2	0.93 "
	H x 3	1.22 "
	T x 1	0.99 "
	T x 2	1.52 "
	T x 3	2.01 "
Reverse	L x R	0.24 "
	M x R	0.39 "
	H x R	0.61 "
	T x R	0.99 "

Source: YANMAR AGRICULTURAL EQUIPMENT CO., LTD.

Appendix C-35

SPECIFICATIONS OF COMBINE HARVESTER

Dimensions

Overall length	6.820 mm
" width	2.640 mm
" height	3.400 mm

Weight 6,400 kg

Engine

Type	Diesel engine
Output	105 HP/2,500 rpm
No. of Cylinders	6
Displacement	5,883 cm

Cutting section

Width	4,250 mm
Height	-120 to 1,500 mm

Threshing section

Cylinder diameter	610 mm
" width	1,040 mm
" speed	470 to 1,150 r.p.m
Concave area	0.61 m ²
" threshing length	590 mm
Cleaning system	Shaker, sieve and winnower

Source: John Deere Werke Zweibrücken

Estimated Operational Cost of Local Thresher
and Combine (Rs/Year)

<u>Machine Name</u>	<u>Local Thresher</u>		<u>Combine</u>	<u>Remarks</u>
	Tractor(45 Hp)	Thresher		
Price (a)	105,000	22,000	800,000	
Machine Life(b)	8 years	10 years	9 years	
Annual Operating Days	300	60 (Paddy)	90 (Paddy & Wheat)	
<u>Fixed Cost</u>				
Depreciation	11,813	1,980	8,000	$\frac{(a)}{(b)} \times 0.9$
Interest	6,353	1,331	48,400	$(a) \times 0.55 \times 11\%$
Tax, Insurance	2,888	605	22,000	$(a) \times 2.75\%$
Sub-total	21,054	3,916	78,400	
<u>Variable Cost</u>				
Repairs & Maintenance	7,350	1,540	56,000	$(a) \times 7\%$
Fuel	91,200	-	32,130	
Lubrication	11,856	285	4,177	13% of Fuel
Operators	12,000	2,400	9,000	
Sub-total	122,406	4,225	101,307	
Total	143,460	8,141	179,707	
	28,692 *			
Annual Total Cost	36,833		179,707	

Note: * Tractor is used 60 days out of 300 days for thresher operation.

Utilization of Paddy Straw

Method	Moisture Contents of Straw	Form of Straw	Usage	Value for Fodder
Beating	Slightly high - High	Straight	Green fodder	Good
Tramping with Bullock	Low	Crumpled	Dry fodder	Fair
Local Thresher	Low - Slightly high	Crumpled and chopped straw with rubbish	"	"
Auto Thresher	High	Straight	Multipurpose	Excellent
Auto Combine	"	"	"	"
Ordinary Combine	"	Crumpled and chopped straw with rubbish	Dry fodder	Bad

Source: The Study Team

Usage and Operational Characteristics of Machinery

Machine	Structure	Operation	Fatigue	Usage
Reaper	Simple	Easy	Slightly high	Reaping of un-lodged paddy and wheat.
Local Thresher	"	"	Medium	Threshing of dried paddy, wheat and sun-flower.
Auto Thresher	Slightly complicated	"	"	Threshing of paddy and wheat.
Auto Combine	Complicated	Difficult	Low	Harvesting of paddy and wheat.
Ordinary Combine	"	Slightly difficult	"	Harvesting of paddy, wheat and sun-flower.

Source: The Study Team

CHARACTERISTICS OF NEW AND OLD VARIETIES OF RICE

By

Dr. Abdul Majid & M.A. Malik

C H A R A C T E R I S T I C S

S.No. Varieties	Paddy grain (mm)		Polished grain (mm)		Chalkiness	Shape of paddy grain	Colour of paddy	Grain shape	Cooking	
	Length	Width	Length	Width						
1. Basmati	9.80	2.20	1.95	1.83	1.60	Abdomi- nal	Longer sword shape	Straw colour with a yellowish tinge.	Fine sword shape	Good
2. Basmati-Pak	10.90	2.20	1.97	1.80	1.66	Clear	Sword shape longer than Bas.370	Straw colour with a yellowish tinge.	Fine sword shape longer than Bas.370.	V. Good
3. Basmati 198	9.70	2.26	1.95	1.90	1.69	Abdomi- nal	Sword shape somewhat shorter than Bas.370.	Straw colour	Fine sword shape somewhat shorter than 370.	Good
4. PK177	9.80	2.30	2.00	1.90	1.70	Abdomi- nal	Longer sword shape	Straw colour with a yellowish tinge. Blackish tinge is present at the tip.	Fine sword shape resemble with 370.	Good
5. PK196	9.90	2.30	2.00	1.80	1.60	Clear	Sword shape longer than Bas.370.	Straw colour with a yellowish tinge.	Fine sword shape longer than 370.	Good
6. PK178	9.70	2.10	1.80	1.60	1.60	Trans- parent	Longer sword shape	Straw colour with a yellowish tinge.	Sword shape finer than Bas.370.	Good
7. IRR1-6	9.70	2.40	2.02	2.00	1.70	Yes	Bold longer as 370 somewhat sword shape	Straw colour	Bold possess chalkiness at the side of grain rounder at the tip.	Good

C H A R A C T E R I S T I C S

S.No.	Name of Varieties	Paddy grain			Polished grain			Chalki-ness	Shape of paddy grain	Colour of paddy	Grain shape	Cooking
		Length	Width	Thickness	Length	Width	Thickness					
8.	Sathi	10.10	2.10	1.80	7.3	1.76	1.54	No	Paddy resemble with 6129	Straw colour with a yellowish tinge.	Long somewhat slender sword shape.	Fair
9.	Mushkan-7	9.67	2.00	1.90	6.70	1.92	1.69	No	Sword shape	Deep chocolate colour	Sword shape smaller than 370	Fair
10.	Hansraj (BARA)	10.00	2.20	1.90	7.00	1.92	1.62	No	Longer than Basmati 370 somewhat bold.	Straw colour with a lemonish tinge possess golden awn.	Long & somewhat thicker slightly pointed at the end.	Fair
11.	Palman-246	9.90	2.00	1.80	6.90	1.70	1.50	No	Long slender finer than 370.	Golden straw colour.	Long slender fine with a roundish end.	Poor
12.	S-12 (Russian permal)	8.15	2.10	1.80	5.21	1.82	1.47	No	Small black at the tip.	Straw yellow colour.	Sword shape smaller & bold than 370.	Poor
13.	IR8	8.81	2.65	2.13	6.14	2.43	1.94	Yes	Bold shorter and rounder	Yellowish colour.	Bold, possess chalkiness.	Poor
14.	Jhona 349	9.09	2.33	2.00	6.36	2.00	1.94	No	Thicker and rounded	Straw yellow colour	Medium size rounder at the tip.	Poor
15.	KS282				6.70	2.00	1.80	No	End round some extent.			

Source: RRI Kala Shah Kaku, Pakistan

SOME OF THE CHARACTERS OF PROMISING BASMATI LINES

<u>Characters</u>	<u>Basmati 370</u>	<u>Basmati 351-1(4001)</u>	<u>Basmati 352-1(4010)</u>
<u>QUALITY</u>			
<u>1. Paddy size (mm)</u>			
i) Length	9.8	9.8	9.8
ii) Width	2.2	2.2	2.1
iii) Thickness	1.8	1.8	1.8
<u>2. Polished rice (mm)</u>			
i) Length	7.0	7.0	6.7
ii) Width	1.8	1.8	1.8
iii) Thickness	1.6	1.6	1.6
iv) Appearance	Trans- parent	Trans- parent	Trans- parent
<u>3. Cooked rice</u>			
i) Length	13.5	14.6	13.2
ii) Width	2.3	2.2	2.1
iii) Thickness	2.0	1.9	2.0
iv) Elongation ratio	1.9	2.1	1.9

SOME OF THE CHARACTERS OF PROMISING MEDIUM GRAIN LINES

<u>Characters</u>	<u>IR6</u>	<u>IR1561</u>	<u>IR9(3108)</u>	<u>44269</u>	<u>4086</u>
<u>QUALITY</u>					
<u>1. Paddy size (mm)</u>					
i) Length	9.7	9.5	9.6	9.8	9.7
ii) Width	2.4	2.3	2.3	2.3	2.3
iii) Thickness	2.0	1.9	2.0	2.0	2.0
<u>2. Polished rice (mm)</u>					
i) Length	6.6	6.4	7.0	7.0	6.6
ii) Width	2.0	2.0	2.0	2.1	1.9
iii) Thickness	1.9	1.9	1.8	1.7	1.9
iv) Appearance	100% chalki- ness	Trans- parent 20% chalky	Trans- parent	Trans- parent shiny	Trans- parent shiny
<u>3. Cooked rice (mm)</u>					
i) Length	11.5	11.0	11.4	11.5	11.6
ii) Width	3.0	3.0	3.0	3.0	2.9
iii) Thickness	2.5	2.4	2.4	2.4	2.5
iv) Elongation ratio	1.7	1.7	1.6	1.6	1.7

Source: RRI Kala Shah Kaku, Pakistan

Appendix C-41

SHOWING MILLING AND HUSKING CHARGES PER 40 K.GS. PADDY

S.NO.	PARTICULARS	RATE FOR THE YEAR
1.	Lifting from Weighing platform to Store godown	Rs.0/40
2.	Drawing of paddy and lifting charges from Khora to machine.	Rs.0/60
3.	Husking charges	Rs.2/75
4.	Screening, weighing of rice, stacking and filling	Rs.0/22
5.	Stacking of rice Bags	Rs.0/08
6.	Transportation, loading, mukadami and Rly. Station expenses	Rs.0/40
7.	Lifting of Bran from machine to godown	Rs.0/03
8.	Weighing charges of Bran	Rs.0/03
9.	Misc. expenses, Chhali, Bardana, Jharoo, Dandari, stationery etc.	Rs.0/50
10.	Salary of staff, bank interest, quality allowances, Employees old age benefit, Social security, etc.	Rs.2/50
11.	Market committee fee	Rs.0/20
TOTAL		Rs.7/71

These expenses might be increased by 15% as per market fluctuation under the prevailing conditions.

INCOME & EXPENDITURE OF 100 MAUNDS (4000 K.GS.) PADDY PROCESSED
BY SHELLER TYPE MILL IN SIND FOR 1984-85
(MAUND EQUAL TO 40 K.GS.)

S.NO.	PARTICULARS	RECOVERY IN MAUNDS	RATE PER MAUND	TOTAL AMOUNT
1.	Rice Special	30-00	Rs.92/-	Rs.2760/-
2.	Rice F.A.Q.	26-00	Rs.83/-	Rs.2158/-
3.	Broken (medium)	6-00	Rs.60/-	Rs. 360/-
4.	Broken (Pin Point)	4-00	Rs.55/-	Rs. 220/-
5.	Bran fine	8-00	Rs.38/-	Rs. 304/-
6.	Bran thick	3-00	Rs.25/-	Rs. 75/-
7.	Husk	21-00	Rs. 1/50	Rs. 31/50
8.	Impurities	2-00	-	-
Total		100-00		Rs.5908/50

Expenditure:-

1.	Cost of paddy 100 maunds @Rs.55/-	Rs.5500/-
2.	Milling & opressional expenses Rs.7/71 per maund of paddy	Rs. 771/-

Total Rs.6271/-

Not Income Rs.5908/50

- Rs. 363/-

Loss per 100 maunds of paddy Rs.363/-

Loss per maund of paddy Rs. 3/63

Appendix C-43

ZONE AND RELATED DISTRICTS

Province	Zone	Division	District
Punjab	1. Rawalpindi	Rawalpindi	Attock, Rawalpindi, Jhelum, Islamabad
	2. Sargoda	Sargoda	Sargoda, Khushab, Mianwali, Bhakkar
		Faisalabad	Faisalabad Toba Tek Singh Jhang
	3. Lahore	Gujranwala	Gujrat, Sialkot Gujranwala
		Lahore	Sheikhupura Lahore, Kasur Okara
	4. Multan	Multan	Sahiwal, Multan Vihari
		D.G. Khan	Muzaffargarh Leiah, D.G. Khan Rajanpur
		Bahawalpur	Bahawalpur Bahawalnagar Rahimyar Khan
	Sind	5. Sukkur	Sukkur
6. Larkana			Jacobabad Shikarpur Larkana
7. Hyderabad		Hyderabad	Sanghar, Tharpakar, Dadu, Hyderabad, Badin, Thatta
8. Karachi		Karachi	Karachi

Province	Zone	Division	District
N.W.F.P.	9. Peshawar	Peshawar	Peshawar Mardan
		Kohat	Kahat, Karak
		Hazara	Abbottabad Mansehra Kohistan
		Malakand	Malakand Swat, Dir Chitral
		D.I. Khan	D.I. Khan Bannu
		F.A.T.A.	Mohmand, Khyber, Kurram, Orakzai, Bajaur, N. Waziristan, W. Waziristan
Baluchistan	10. Quetta	Quetta	Quetta, Pishin, Loralai, Zhob, Chagai
		Kalat	Kalat, Khuzdar, Kharan, Lasbela
		Makran	Turbat, Gwadar, Panjgur
		Sibi	Sibi, Kohin, Kachhi
	11. Nasirabad		Nasirabad

Appendix C-44

Estimated Population by Zone in 1984

Unit: 100 person)

Zone	Total	Urban	Rural
Pakistan	93,286	27,334	65,952
Punjab	52,252	15,177	37,075
1. Rawalpindi	4,921	1,622	3,299
2. Sargoda	11,688	3,210	8,478
3. Lahore	18,142	6,995	11,147
4. Multan	17,501	3,350	14,151
Sind	21,331	9,456	11,875
5. Sukkur	4,140	1,079	3,061
6. Larkana	3,069	615	2,454
7. Hyderabad	7,866	1,759	6,107
8. Karachi	6,256	6,003	253
N.W.F.P.	14,373	1,881	12,492
9. Peshawar	14,373	1,881	12,492
Balchistan	5,330	820	4,510
10. Quetta	4,535	476	4,059
11. Nashirabad	795	344	451

Source: Estimation by Study Team based on the data of Population Census, Bureau of Statistics Government of the Punjab, Bureau of Statistics P & D Department Government of Balchistan and WAPDA

RICE DISTRIBUTION BY GOVERNMENT AND PRIVATE IN 1984

Government
Private
Total

(Unit: 1000 ton)

Destination Origin	1 Rawalpindi	2 Sargoda	3 Lahore	4 Multan	5 Sukkur	6 Larkana	7 Hyderabad	8 Karachi	9 Peshawar	10 Quetta	11 Nashirabad	Total
1. Rawalpindi	0.5								50.3			50.8
2. Sargoda		121.3						35.0				35.0
3. Lahore	36.4							35.0				121.3
	36.4		345.2		0.7	40.8		401.0				156.3
4. Multan				181.9	0.7	40.8		30.8	0.6	5.8		401.0
					0.7	40.8		431.8	0.6	5.8		460.3
5. Sukkur								36.6				861.3
								1.7				36.6
6. Larkana	63.7				41.7			38.3				183.6
	63.7							2.4				220.2
7. Hyderabad								2.4				2.4
												41.7
8. Karachi								2.4				44.1
								640.3				640.3
9. Peshawar								24.8				350.6
								665.2				990.9
10. Quetta								93.7				93.7
												354.6
11. Nashirabad								0.0				0.0
												72.0
Total	101.3	121.3	355.1	192.2	160.2	180.1	436.2	1,325.0	129.3	33.2	41.1	3,075.0
												1,225.9
												1,849.1
												3,075.0

TRANSPORTATION OF RICE FOR R.E.C.P. BY KIND BY TRANSPORTATION MEAN

(Unit: 1,000 ton)

Zone	IRRI-6				Basmati				Total			
	PR	MLC	PT	Total	PR	MLC	Total	PR	MLC	PT	Total	
1. Rawalpindi	-	-	-	-	-	-	-	-	-	-	-	
2. Sargoda	(98.2)	(1.8)	-	(100.0)	(91.0)	(9.0)	(100.0)	(95.7)	(4.3)	-	(100.0)	
	22.4	0.4	-	22.8	11.1	1.1	12.2	33.5	1.5	-	35.0	
3. Lahore	(85.6)	(14.4)	-	(100.0)	(77.4)	(22.6)	(100.0)	(80.7)	(19.3)	-	(100.0)	
	139.9	23.5	-	163.4	183.9	53.7	237.6	323.8	77.2	-	401.0	
4. Multan	(44.3)	(55.7)	-	(100.0)	(84.9)	(15.1)	(100.0)	(63.4)	(36.6)	-	(100.0)	
	8.6	10.8	-	19.4	14.6	2.6	17.2	23.2	13.4	-	36.6	
5. Sukkur	-	-	(100.0)	(100.0)	-	-	-	-	-	(100.0)	(100.0)	
	-	-	2.4	2.4	-	-	-	-	-	2.4	2.4	
6. Larkana	(21.2)	(19.1)	(59.7)	(100.0)	-	-	-	(21.2)	(19.1)	(59.7)	(100.0)	
	135.9	122.2	382.2	640.3	-	-	-	135.9	122.2	382.2	640.3	
7. Hyderabad	(1.0)	(26.2)	(72.8)	(100.0)	-	-	-	(1.0)	(26.2)	(72.8)	(100.0)	
	0.9	24.6	68.2	93.7	-	-	-	0.9	24.6	68.2	93.7	
8. Karachi	-	-	-	-	-	-	-	-	-	-	-	
9. Peshawar	-	-	-	-	-	-	-	-	-	-	-	
10. Quetta	-	-	-	-	-	-	-	-	-	-	-	
11. Nashirabad	(66.9)	(33.1)	-	(100.0)	-	-	-	(66.9)	(33.1)	-	(100.0)	
	11.3	5.6	-	16.9	-	-	-	11.3	5.6	-	16.9	
Total	(33.3)	(19.5)	(47.2)	(100.0)	(78.5)	(21.5)	(100.0)	(43.1)	(20.0)	(36.9)	(100.0)	
	319.0	187.1	452.8	958.9	209.6	57.4	267.0	528.6	244.5	452.8	1,225.9	

Note: PR Pakistan Railway
MLC National Logistic Cell
PT Private Track

Figures in parentheses are percentage.

Source: R.E.C.P.

PRIVATE RICE DISTRIBUTION BY TRANSPORTATION MODE IN 1984

PR
NLC
PT

(Unit: 1000 ton)

Destination Origin	1 Rawalpindi	2 Sargoda	3 Lahore	4 Multan	5 Sukkur	6 Larkana	7 Hyderabad	8 Karachi	9 Peshawar	10 Quetta	11 Nashirabad	Total
1. Rawalpindi									0.5			0.5
2. Sargoda									49.8			49.8
3. Lahore	4.3 32.1				0.7		0.3 40.5	22.8 8.0	0.6			28.7 86.4
4. Multan								0.6 1.1				0.6 1.1
5. Sukkur												
6. Larkana	63.7		9.9	10.3	0.1			0.3	6.3			90.6
7. Hyderabad					43.5		15.1	24.5		8.5		91.6
8. Karachi												
9. Peshawar												
10. Quetta												
11. Nashirabad	0.7								0.1			0.8
Total	64.4 4.3 32.1		9.9	10.3	0.1 0.7 117.9		25.7 0.3 81.3	41.8 22.8 75.4		14.6		156.3 92.5 28.7 385.2

Note: PRC (Pakistan Railways)
NLC (National Logistic Cell)
PT (Private Truck)

Appendix C-48

Quantity of Wheat and Rice Procured by the Government
and Storage Capacity for Wheat and Rice a/
(1972/73 to 1987/88)
('000 mt)

Year	Quantity of <u>b/</u> Wheat Procured	Quantity of <u>b/</u> Rice Procured	Wheat Storage Capacity	Rice Storage Capacity
1972/73	208	141	-	-
1973/74	1,342	609	-	-
1974/75	1,253	659	-	-
1975/76	1,236	697	-	-
1976/77	2,338	655	-	-
1977/78	1,842	908	1,710	667
1978/79	1,086	1,200	1,711	699
1979/80	2,376	1,130	1,786	688
1980/81	2,954	1,005	1,906	838
1981/82	3,988	1,094	2,053	838
1982/83	3,131	1,100	2,936	838
1987/88	-	-	5,500	1,500

a/ The 1987/88 storage estimates are based on Sixth Plan projections. The 1982/83 procurement estimates are based on figures reported in the Pakistan Economic Survey 1982/83, Finance Division. All other estimates are based on Agricultural Statistics of Pakistan, 1982, Ministry of Food and Agriculture, Islamabad, August 1983.

b/ See this Appendix, Table 7, for total production of wheat and rice.

Source: Tabor, 1984.

**STATEMENT SHOWING MARKET PRICES OF PADDY (VARIETY WISE)
FOR THE PERIOD 1979-80 TO 1985-86 IN MAJOR MARKET OF PUNJAB**
(Prices in Rs./100 kg)

Year/ Month	SHEIKHUPURA		MURIDKEY		GUJRANWALA		HAFIZABAD		KAMOKEY		STALKOT	
	Basmati	Irrir-6	Basmati	Irrir-6	Basmati	Irrir-6	Basmati	Irrir-6	Basmati	Irrir-6	Basmati	Irrir-6
1979-80												
November	158.00	78.00	161.00	79.50	156.00	82.00	157.50	83.00	158.50	80.50	155.00	Nil
December	160.00	83.50	160.25	81.75	162.25	83.25	164.00	85.00	159.25	81.00	163.50	-
January	161.25	80.70	162.75	82.00	160.75	83.75	164.00	84.00	161.00	84.00	164.00	-
February	164.00	82.25	163.50	83.50	164.25	84.00	165.25	86.00	164.00	85.00	160.25	-
1980-81												
November	192.50	-	202.00	83.00	192.50	105.00	198.00	109.00	190.00	105.00	187.50	105.00
December	195.00	107.00	202.00	83.00	205.00	108.00	198.00	114.50	195.00	107.00	187.00	113.50
January	195.50	110.25	205.00	85.00	200.00	102.25	200.00	110.00	200.00	107.00	192.50	110.00
February	200.00	112.50	212.00	90.00	212.00	110.00	212.00	116.00	205.00	110.00	200.00	114.50
1981-82												
November	214.50	137.50	220.00	128.50	225.00	125.00	217.50	138.50	217.50	131.50	233.50	-
December	224.50	137.50	220.00	133.50	228.00	140.00	213.50	135.00	220.00	133.50	232.50	127.00
January	230.00	140.00	230.00	133.50	230.00	140.00	220.00	140.00	222.00	133.50	235.00	130.00
February	235.00	140.00	232.00	135.00	235.00	142.50	222.00	142.00	224.00	135.00	240.00	132.00
1982-83												
November	218.50	127.50	218.00	132.00	220.00	131.00	222.50	134.25	218.75	131.00	229.50	131.50
December	219.00	130.00	220.25	133.25	236.00	-	224.65	135.00	221.37	132.50	231.25	133.75
January	200.00	130.00	220.00	135.00	238.00	132.00	229.90	135.00	222.25	132.00	234.50	135.00
February	232.50	132.75	224.25	140.00	240.00	135.00	234.70	140.00	230.28	135.25	240.70	135.00
1983-84												
November	225.00	130.00	224.00	128.00	223.75	113.75	225.75	115.50	226.00	133.00	215.00	133.75
December	228.25	129.00	228.50	130.37	229.00	131.25	231.50	132.75	229.50	132.25	226.25	-
January	230.00	130.00	230.75	132.00	232.00	130.00	232.00	135.00	234.00	135.00	232.00	135.00
February	246.00	134.50	245.00	140.00	242.00	138.78	248.00	139.25	242.50	139.25	246.50	140.50
1984-85												
November	225.00	137.00	222.80	130.50	229.00	130.00	226.00	129.50	236.00	137.50	231.25	136.25
December	226.00	139.00	225.50	132.75	232.75	132.25	230.00	132.00	232.00	134.00	232.00	137.00
January	238.00	140.00	232.75	137.00	234.00	135.00	234.75	135.00	236.00	138.50	233.50	137.00
February	242.00	142.00	238.25	139.50	235.50	138.50	238.75	138.25	240.50	142.50	245.50	142.50
1985-86												
November	260.25	142.50	258.75	148.12	266.95	149.05	259.75	147.50	261.25	146.00	245.00	148.00

Source: Directorate of Agriculture (Economic & Marketing), Punjab

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1980-81

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	190.00	198.00	214.00	222.00	222.00	222.00	242.57	252.00	256.00	256.00	256.00	252.00	231.88
Hyderabad	175.00	182.50	190.00	190.00	190.00	195.00	210.00	215.00	220.00	235.00	250.00	260.00	210.37
Sukkur	180.00	193.75	207.50	215.00	227.50	233.75	225.00	232.00	237.00	238.00	237.50	240.00	215.48
Lahore	160.00	175.00	190.00	190.00	190.00	190.00	190.00	216.00	215.00	200.00	200.00	200.00	193.00
Multan	196.50	215.75	201.50	216.60	240.25	219.00	220.00	226.67	232.50	232.50	230.00	230.00	221.77
Faisalabad	190.75	202.50	210.75	210.80	221.25	218.00	218.25	222.00	270.00	205.00	219.25	216.00	217.01
Rawalpindi	197.50	220.00	220.00	220.60	225.00	228.75	247.50	250.00	257.00	250.00	250.00	250.00	234.69
Peshawar	205.50	225.00	244.75	260.00	260.00	260.00	260.00	260.00	260.00	260.00	260.00	260.00	251.27
Quetta	208.00	220.00	220.00	220.00	227.00	227.00	235.00	262.00	263.00	257.00	248.00	247.00	236.16
Gujranwala	162.00	163.00	171.50	176.00	185.33	190.00	190.00	190.00	190.00	200.00	200.00	198.00	184.61
Sheikhpura	157.00	167.89	181.67	202.53	212.00	210.00	207.75	173.13	171.50	175.00	176.50	182.75	184.56
Sialkot	160.00	165.00	175.00	179.37	189.16	191.25	205.00	190.00	195.00	188.33	180.00	181.67	189.35
Okara	142.25	142.50	149.00	170.00	190.00	190.00	190.00	181.67	175.33	162.50	170.00	186.87	171.30
Jacobabad	212.33	205.00	208.75	200.00	205.00	205.00	205.00	213.25	203.33	210.00	215.00	215.00	209.63
Larkana	205.00	210.00	190.00	200.00	215.00	210.00	220.00	220.00	221.66	226.25	227.50	231.66	214.75
Dabu	228.00	227.00	220.00	227.00	228.00	232.00	245.00	245.00	240.00	230.00	230.00	232.00	230.75
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	155.00	150.00	172.50	190.00	210.00	197.00	210.00	181.75	183.25	195.00	200.00	205.00	187.45
Bahawalnagar	167.00	210.00	218.50	198.50	195.00	190.67	196.25	205.00	198.33	187.50	200.00	220.00	200.00

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1980-81

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	105.00	105.00	105.00	100.83	100.00	100.00	112.60	118.80	120.00	138.79	142.00	140.00	115.23
Hyderabad	109.12	108.00	107.50	105.00	111.25	120.37	125.62	125.50	131.25	136.16	136.00	140.00	121.31
Sukkur	112.50	105.00	112.50	105.83	112.50	116.25	115.00	125.00	123.75	123.75	126.25	132.50	117.56
Lahore	88.75	94.00	94.00	95.50	98.88	98.75	95.00	105.00	101.25	100.00	104.68	113.00	99.98
Multan	65.00	75.00	91.25	92.50	95.00	95.00	120.00	120.00	130.00	130.00	130.00	122.00	105.48
Faisalabad	82.50	95.00	90.00	90.00	93.50	97.50	106.88	113.75	119.13	115.00	119.25	118.13	103.55
Rawalpindi	89.50	95.50	90.00	90.00	84.00	86.00	93.00	112.50	115.00	112.00	105.00	116.00	99.00
Peshawar	-	-	-	-	123.00	123.00	75.00	75.00	95.00	95.00	95.75	99.10	97.60
Quetta	115.00	115.00	115.00	127.50	135.00	140.00	135.62	122.50	127.50	128.75	136.25	151.25	129.11
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	71.00	71.00	71.00	71.00	71.00	71.00	71.00	74.25	73.25	72.00	81.00	85.00	73.54
Jacobabad	160.00	160.00	162.50	160.00	160.00	160.00	160.00	-	-	-	-	-	161.31
Larkana	117.00	110.00	112.50	110.00	110.00	113.33	120.00	120.83	120.00	137.50	137.50	145.00	121.14
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	85.00	85.00	85.00	85.00	82.00	86.33	98.50	85.00	91.75	110.50	110.75	112.50	93.11
Bahawalnagar	85.00	86.00	112.50	100.00	100.00	80.00	80.00	90.00	100.00	92.50	120.00	110.00	96.33

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1981-82

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	252.00	265.00	265.00	265.00	265.00	268.00	274.00	279.75	280.00	280.00	281.00	280.00	271.23
Hyderabad	255.00	258.75	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	267.81
Sukkur	250.00	255.00	270.00	270.00	275.00	275.00	275.25	275.00	275.00	275.00	275.00	275.00	270.44
Lahore	200.00	211.25	228.25	230.00	230.00	223.00	172.50	182.50	180.00	218.00	221.00	220.00	211.39
Multan	248.00	260.75	265.00	265.00	260.00	230.00	216.00	227.50	230.00	230.00	230.00	230.00	241.02
Faisalabad	222.75	222.00	246.25	239.33	248.66	230.00	234.50	246.00	257.00	236.00	229.25	238.75	237.75
Rawalpindi	250.00	257.50	260.00	260.00	272.50	280.00	275.00	270.00	270.00	270.00	270.00	270.00	267.08
Peshawar	260.00	275.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	275.00
Quetta	253.00	260.25	265.00	273.00	276.25	280.40	278.00	271.78	275.00	274.25	282.00	278.25	273.09
Gujranwala	190.00	210.00	206.00	210.00	221.00	197.00	220.00	192.00	192.00	182.00	190.00	184.00	199.50
Sheikhupura	191.50	205.00	211.50	208.75	225.00	210.00	195.00	178.00	180.00	200.00	109.00	190.00	198.63
Sialkot	182.25	202.50	205.00	220.00	226.00	221.50	215.00	210.00	207.00	212.50	208.75	220.00	211.25
Okara	163.50	162.50	190.25	212.50	202.50	195.00	203.33	225.00	215.00	216.67	203.00	203.00	199.35
Jacobabad	260.00	260.00	260.00	260.00	290.00	300.00	300.00	300.00	247.16	261.00	269.50	275.00	273.50
Larkana	240.00	240.00	240.00	261.25	275.00	270.00	276.25	275.00	282.50	290.00	288.75	320.00	271.50
Dabu	242.00	242.00	241.50	243.00	247.00	255.00	260.00	260.00	260.00	260.00	260.00	280.00	252.54
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	205.00	215.75	217.50	210.00	224.00	210.00	210.00	210.00	210.00	210.00	210.00	211.00	211.94
Bahawalnagar	220.20	240.00	222.50	235.50	246.25	220.00	215.00	210.00	212.00	221.50	220.00	230.00	224.40

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1981-82

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	142.00	145.25	145.00	145.00	145.00	146.40	156.00	155.00	150.00	130.00	150.00	142.00	145.97
Hyderabad	148.25	163.75	170.62	170.00	170.83	171.88	166.66	169.37	165.83	164.37	167.75	170.00	166.25
Sukkur	112.87	117.12	133.00	150.00	169.50	177.50	175.00	155.00	156.45	164.50	177.25	170.00	154.83
Lahore	125.00	130.00	132.00	127.12	100.50	130.00	132.50	130.00	135.00	135.00	133.25	128.00	128.20
Multan	120.00	132.50	132.50	132.50	132.50	132.50	130.00	132.50	132.50	137.50	137.50	137.50	132.50
Faisalabad	115.50	116.25	122.50	125.00	131.00	130.00	128.75	130.00	125.83	116.83	115.00	120.00	123.08
Rawalpindi	105.00	110.00	121.00	132.00	147.50	140.00	145.00	147.50	175.00	175.00	133.50	135.00	138.88
Peshawar	120.00	120.00	150.00	120.00	120.00	120.00	120.00	120.00	120.00	142.50	170.00	175.00	133.13
Quetta	130.00	165.75	172.83	168.12	168.33	168.33	153.33	149.25	150.00	155.83	178.33	177.12	161.44
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	74.00	78.00	93.00	102.00	105.00	100.50	102.50	102.50	102.50	102.50	102.50	102.50	97.71
Jacobabad	160.00	160.00	160.00	160.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	190.00	183.83
Larkana	141.25	143.33	147.00	137.50	142.50	151.25	158.00	161.66	152.50	155.00	185.00	180.00	154.58
Dabu	120.00	130.00	140.00	140.00	140.00	140.00	147.00	149.00	145.00	145.00	145.00	145.00	140.83
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	85.00	90.50	88.75	95.00	110.00	105.00	108.00	110.00	110.00	111.25	90.00	90.00	99.46
Bahawalnagar	100.00	90.50	95.00	98.00	115.00	120.00	110.00	112.50	120.00	110.00	112.00	125.00	109.00

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1982-83

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	276.00	290.00	287.70	293.00	289.00	289.00	277.00	279.00	259.00	253.25	259.25	262.00	276.18
Hyderabad	268.00	276.50	261.00	260.00	260.00	260.00	260.00	256.00	260.00	260.00	260.00	260.00	261.04
Sukkur	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00
Lahore	220.00	220.00	219.00	220.00	225.00	235.00	217.50	191.25	190.00	198.00	192.00	205.80	211.13
Multan	231.25	237.50	240.00	240.00	240.00	232.80	220.00	220.00	220.00	220.00	220.00	221.40	228.60
Faisalabad	239.75	250.00	238.00	233.50	236.00	249.50	240.00	234.00	237.00	238.75	241.00	244.00	240.13
Rawalpindi	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	277.00	270.50
Peshawar	300.00	300.00	300.00	207.50	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	307.29
Quetta	279.00	276.25	289.00	292.50	297.00	294.00	284.00	292.75	295.75	299.75	299.50	300.00	291.63
Gujranwala	186.00	188.00	190.00	190.00	245.00	190.00	190.00	190.00	192.00	177.00	193.33	205.07	194.70
Sheikhupura	190.67	230.00	215.50	210.00	237.50	170.00	190.00	200.00	182.00	197.50	197.50	199.33	201.00
Sialkot	208.75	205.00	212.50	212.50	230.00	207.50	210.00	216.75	212.50	212.50	220.00	211.67	213.31
Okara	204.25	206.00	212.50	223.53	238.75	215.00	213.33	215.00	212.50	215.00	212.50	220.00	215.70
Jacobabad	272.50	267.50	260.00	275.00	275.00	270.00	270.00	270.00	270.00	270.00	280.00	277.50	271.46
Larkana	325.00	322.50	325.00	320.00	315.00	301.25	340.00	322.50	331.66	340.00	320.00	290.00	321.08
Dabu	260.00	270.00	290.00	300.00	295.00	265.00	255.00	260.00	270.00	265.00	265.00	270.00	272.08
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	210.00	210.00	210.00	210.00	210.00	210.00	220.00	215.00	211.75	210.00	200.00	210.00	210.56
Bahawalnagar	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1982-83

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	145.50	155.00	154.25	153.00	144.00	141.00	138.00	139.25	134.50	136.50	136.00	138.25	142.94
Hyderabad	165.83	158.75	156.25	150.00	147.00	150.00	148.33	150.33	155.00	160.00	156.62	155.00	154.43
Sukkur	155.00	170.00	175.00	190.00	152.50	161.37	160.25	165.00	167.50	161.25	166.50	187.00	167.61
Lahore	129.50	132.75	136.00	136.00	126.50	116.00	125.00	112.50	112.50	112.50	109.00	105.00	121.10
Multan	137.50	137.50	137.50	137.50	130.87	127.50	130.00	130.00	130.00	126.00	130.00	130.00	132.03
Faisalabad	120.00	128.75	126.25	123.75	119.17	120.00	131.66	130.00	128.25	113.33	115.00	120.00	123.01
Rawalpindi	137.00	135.00	138.00	138.00	111.25	100.00	111.25	130.00	112.62	142.50	129.67	140.00	127.11
Peshawar	175.00	176.50	179.00	183.75	185.00	186.25	190.00	190.00	190.00	190.00	190.00	190.00	185.46
Quetta	171.88	175.00	177.50	195.83	177.50	181.25	168.12	177.50	181.25	181.25	178.12	190.00	179.60
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	105.00	115.00	115.00	120.25	115.00	94.00	92.00	95.00	87.50	93.33	107.00	101.00	103.34
Jacobabad	160.00	160.00	168.75	174.16	189.12	200.00	200.00	200.00	200.00	200.00	200.00	197.50	187.46
Larkana	188.75	185.00	182.50	180.00	180.00	182.50	187.50	191.25	181.66	185.00	180.00	160.00	182.01
Dabu	145.00	145.00	141.25	140.00	142.00	143.12	145.00	145.00	157.50	152.00	180.00	180.00	151.32
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	90.00	95.00	90.00	90.00	90.00	90.00	110.00	130.00	102.50	90.00	100.00	110.00	98.96
Bahawalnagar	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1983-84

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	272.00	280.00	270.80	272.30	270.00	291.22	269.60	262.00	241.45	241.50	242.20	243.00	263.07
Hyderabad	260.00	262.50	270.00	270.00	266.25	259.00	250.00	244.00	242.00	242.00	236.40	235.00	253.09
Sukkur	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00
Lahore	208.00	208.00	208.00	208.00	215.50	238.00	238.00	238.00	254.50	260.00	236.60	203.00	226.30
Multan	225.50	230.00	230.00	230.00	230.00	222.40	215.00	215.00	233.75	210.00	212.00	215.00	222.38
Faisalabad	241.00	250.00	250.00	252.25	230.75	216.40	219.50	216.25	211.25	207.25	207.40	210.75	224.06
Rawalpindi	280.00	280.00	280.00	280.00	280.00	268.00	265.00	265.00	265.00	265.00	265.00	265.00	271.50
Peshawar	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00
Quetta	296.50	289.75	275.00	285.25	282.25	285.00	270.25	282.75	275.50	263.00	273.60	283.50	280.29
Gujranwala	210.00	206.00	196.00	204.50	211.50	210.00	197.00	182.00	179.50	180.00	224.75	225.33	201.30
Sheikhupura	210.00	215.00	220.00	221.00	212.50	202.50	200.00	200.00	201.25	205.00	205.00	198.75	205.91
Sialkot	215.00	220.00	220.00	212.50	211.25	220.00	199.50	190.00	192.50	195.00	207.25	200.00	206.91
Okara	218.33	220.00	205.00	205.00	220.00	217.50	212.50	212.00	215.00	205.00	205.00	212.50	212.15
Jacobabad	275.00	275.00	270.00	265.00	265.00	265.00	265.00	265.00	265.00	267.50	270.00	270.00	268.12
Larkana	312.00	310.00	313.00	310.00	310.62	318.12	318.12	316.25	271.87	295.00	292.50	280.00	303.95
Dabu	180.00	180.00	182.50	185.00	185.00	176.25	320.00	320.00	320.00	320.00	320.00	320.00	267.39
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	210.00	210.00	210.00	219.00	210.00	205.00	210.00	220.00	210.00	227.50	240.06	257.43	219.91
Bahawalnagar	230.00	240.00	232.50	234.00	266.67	270.00	246.66	273.66	240.00	237.50	237.50	246.00	246.20

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1983-84

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	146.00	155.20	145.20	145.00	145.00	145.00	160.00	160.00	160.00	160.00	155.50	150.00	152.24
Hyderabad	153.00	152.75	167.50	158.25	148.50	155.00	160.00	164.37	161.25	169.25	167.66	163.83	160.11
Sukkur	187.00	184.12	167.50	172.37	175.00	170.00	160.00	181.00	188.00	176.50	163.75	160.00	173.77
Lahore	112.50	109.20	106.00	105.25	102.33	113.18	114.90	116.00	120.00	115.75	115.00	115.00	112.95
Multan	121.67	105.00	115.00	102.50	122.50	121.66	115.00	120.00	113.00	120.00	125.00	132.60	117.82
Faisalabad	140.00	160.00	120.00	133.87	102.00	105.00	104.25	103.50	105.66	107.00	109.33	115.00	117.34
Rawalpindi	140.00	173.75	175.00	180.00	133.12	125.00	150.00	158.75	152.50	143.75	146.25	141.67	151.56
Peshawar	190.00	190.00	190.00	190.00	190.00	190.00	190.00	190.00	160.00	160.00	190.00	176.25	183.85
Quetta	178.75	175.00	180.00	177.50	176.25	180.00	177.50	180.83	173.75	156.25	172.50	160.00	174.03
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	125.00	125.00	125.00	125.00	117.50	120.00	111.25	110.00	110.00	110.00	112.75	116.75	117.35
Okara	113.00	113.00	98.00	98.00	101.00	98.00	99.00	98.50	105.00	95.00	92.00	93.50	100.33
Jacobabad	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	205.00	200.00	230.00	200.00	202.92
Larkana	200.00	200.00	202.50	198.12	195.60	194.38	200.00	172.50	140.00	152.50	177.50	190.00	186.92
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	125.00	125.00	130.00	125.00	110.00	110.00	115.00	118.00	122.00	120.00	117.60	126.25	120.32
Bahawalnagar	144.00	170.00	158.50	155.00	175.00	150.00	143.33	140.00	143.00	124.00	124.00	140.00	147.23

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1984-85

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	257.64	265.75	264.00	258.00	260.00	262.24	274.00	254.20	258.00	265.74	270.50	282.20	264.36
Hyderabad	250.00	258.12	269.37	253.12	260.62	270.00	257.50	255.00	256.87	285.00	260.00	265.00	261.72
Sukkur	245.00	250.00	240.00	245.00	250.00	250.00	250.00	279.25	283.50	280.00	285.00	285.00	261.90
Lahore	203.00	216.60	231.75	240.00	230.00	229.00	215.25	219.50	243.00	236.50	231.20	230.00	227.15
Multan	223.75	234.20	230.00	226.75	224.60	227.25	220.25	222.75	229.75	230.00	234.60	240.50	228.70
Faisalabad	210.00	219.60	235.00	232.33	236.60	226.75	220.50	231.00	223.00	221.25	224.20	236.00	226.35
Rawalpindi	271.25	290.00	290.00	290.00	290.00	278.75	260.00	264.00	220.00	270.00	290.00	290.00	275.33
Peshawar	310.00	300.00	306.66	310.00	320.00	320.00	320.00	320.00	320.00	300.00	300.00	300.00	310.56
Quetta	290.50	271.25	270.00	280.00	286.25	275.00	282.50	270.00	280.00	289.75	290.00	282.25	289.21
Gujranwala	220.00	196.75	202.25	210.00	199.00	200.50	201.00	207.00	209.00	213.50	223.75	213.75	208.04
Sheikhpura	201.25	206.25	210.00	213.75	207.50	190.00	190.00	197.00	193.73	195.33	203.00	210.25	201.51
Sialkot	200.00	202.50	207.50	215.00	202.50	204.00	195.00	197.50	200.00	213.33	205.00	201.00	203.61
Okara	197.50	209.75	209.16	211.87	221.05	227.50	237.50	237.50	245.00	207.50	233.75	215.00	221.09
Jacobabad	270.00	270.00	270.00	267.50	267.50	300.00	300.00	300.00	300.00	300.00	300.00	300.00	287.08
Larkana	286.66	288.12	291.25	297.50	296.62	306.87	305.00	317.50	320.00	316.50	319.00	317.00	305.17
Dabu	350.00	360.00	360.00	360.00	360.00	320.00	320.00	320.00	320.00	318.50	320.00	318.00	333.54
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	275.00	223.75	220.00	223.33	195.00	200.00	215.00	216.50	214.00	230.00	250.00	250.00	226.05
Bahawalnagar	250.00	275.00	275.00	270.00	270.00	253.33	236.66	255.00	270.00	270.00	255.00	250.00	260.83

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF BASMATI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1984-85

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	162.70	170.00	170.00	170.00	162.50	140.74	122.10	126.00	126.00	126.00	126.00	126.00	144.00
Hyderabad	164.00	171.75	159.37	190.62	180.00	172.50	151.87	142.75	168.12	159.37	170.00	180.00	167.53
Sukkur	160.00	160.00	160.00	136.25	136.25	140.00	140.00	153.00	179.00	179.00	179.00	178.00	157.96
Lahore	114.00	135.00	130.00	121.00	128.50	136.00	124.00	133.00	130.00	130.00	130.00	137.50	129.08
Multan	132.50	138.50	132.50	132.75	130.68	137.50	137.65	129.12	137.50	132.50	137.50	145.00	135.31
Faisalabad	115.00	119.74	128.75	121.33	128.75	130.00	116.25	125.00	144.75	137.50	125.00	145.00	128.09
Rawalpindi	160.00	175.00	177.50	170.00	180.00	181.25	180.00	168.00	178.00	157.80	172.50	174.35	172.80
Peshawar	160.00	160.00	160.00	170.00	170.00	175.00	180.00	200.00	200.00	200.00	200.00	200.00	181.25
Quetta	180.00	175.83	186.66	176.87	180.00	173.33	170.00	165.00	167.50	165.00	169.00	168.75	173.16
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	120.00	113.00	115.00	110.00	117.50	111.66	109.05	108.33	105.75	110.66	105.65	113.25	111.65
Sialkot	115.50	115.00	123.80	115.00	111.25	114.80	122.25	115.00	118.75	120.00	112.00	108.50	115.99
Okara	92.00	110.00	120.00	123.50	120.00	119.00	-	-	-	-	-	-	114.08
Jacobabad	200.00	200.00	200.00	200.00	200.00	200.00	180.00	175.00	160.00	160.00	160.00	160.00	181.15
Larkana	190.83	190.00	198.12	200.37	186.87	190.62	200.00	210.00	227.50	220.00	220.50	215.00	204.15
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	126.00	110.00	107.50	122.50	110.00	105.00	102.50	110.00	114.00	124.00	155.00	115.00	116.79
Bahawalnagar	160.00	150.00	140.00	143.50	135.00	130.00	122.50	126.00	130.00	140.00	125.00	122.50	135.38

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1980-81

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyderabad	65.00	65.00	65.00	65.00	65.87	71.87	70.00	65.00	65.00	65.00	75.00	75.00	67.73
Sukkur	61.75	65.50	72.00	70.20	66.50	73.37	70.00	70.00	70.00	70.00	72.00	72.00	69.44
Lahore	74.00	79.75	83.00	83.00	83.00	83.00	83.00	100.00	105.00	105.00	105.00	105.00	90.73
Multan	93.50	105.00	93.00	93.80	96.50	90.00	89.95	91.75	94.38	90.50	97.50	98.00	94.49
Faisalabad	84.50	95.00	85.25	85.60	93.50	99.50	117.00	121.00	109.00	106.00	102.25	99.50	99.43
Rawalpindi	90.00	90.00	90.00	91.00	90.00	105.00	136.25	132.00	116.75	105.00	100.00	100.00	103.83
Peshawar	105.00	100.00	120.00	140.00	140.00	140.00	140.00	126.25	125.00	125.00	125.00	125.00	125.94
Quetta	74.75	74.33	71.25	70.80	73.50	75.00	77.00	80.00	83.00	83.00	81.00	81.25	77.07
Gujranwala	80.00	80.00	82.00	80.00	80.00	80.00	80.00	83.33	86.00	87.50	86.00	91.00	82.99
Sheikhupura	74.00	79.50	81.00	81.00	82.50	85.50	81.75	92.50	84.00	84.50	75.25	86.00	82.96
Sialkot	71.00	77.50	80.50	80.50	85.83	86.25	80.50	82.00	106.25	101.25	96.87	96.67	87.09
Okara	71.00	71.00	73.25	71.00	71.00	71.00	71.00	82.50	84.50	84.50	86.25	84.50	76.79
Jacobabad	64.00	55.00	55.75	55.00	55.00	55.00	55.00	62.50	65.00	65.00	75.00	75.00	74.44
Larkana	50.25	57.50	52.75	57.00	60.50	61.00	63.00	66.83	66.16	68.87	72.00	71.66	62.29
Dabu	52.50	56.50	58.00	60.00	63.00	63.00	66.75	64.00	67.50	67.50	66.25	68.75	60.36
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	74.00	76.33	85.00	82.50	85.00	86.75	89.50	95.00	93.65	91.25	92.00	91.00	86.83
Bahawalnagar	64.25	78.75	120.00	80.75	79.67	82.00	88.00	84.50	82.00	90.12	89.00	91.00	85.84

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1980-81

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	60.00	64.00	62.84	64.00	64.00	66.00	69.35	73.25	70.00	65.00	70.00	70.00	66.53
Hyderabad	53.00	42.50	54.75	57.12	59.50	58.87	58.25	55.00	55.75	55.66	61.25	59.50	55.93
Sukkur	41.50	44.00	43.87	43.33	54.00	56.62	51.25	49.00	47.00	46.25	45.00	51.37	47.77
Lahore	54.00	56.33	55.00	54.00	55.50	59.25	63.00	66.25	70.50	72.00	71.50	72.25	62.47
Multan	53.50	53.50	55.15	55.00	55.00	55.00	58.00	61.00	62.00	63.25	75.00	76.00	60.20
Faisalabad	51.00	52.00	52.00	55.00	55.00	57.50	54.50	74.00	69.00	72.75	75.00	75.00	61.90
Rawalpindi	-	-	-	-	-	-	-	-	-	-	-	-	-
Peshawar	50.00	55.00	61.00	65.00	58.50	65.00	65.00	65.00	65.00	65.00	65.00	65.00	62.04
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	51.50	60.00	62.00	65.00	65.50	60.00	63.00	59.00	61.00	62.00	66.75	73.00	62.40
Jacobabad	47.00	48.00	47.50	50.00	48.00	48.00	48.00	45.75	45.00	45.00	45.00	45.00	46.85
Larkana	38.50	42.50	43.50	43.00	49.00	49.00	49.00	49.00	49.33	48.75	-	-	46.16
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	55.00	64.50	72.00	71.00	68.50	72.00	68.50	72.00	71.00	72.00	75.00	75.00	69.71
Bahawalnagar	50.00	70.00	71.25	70.50	60.00	66.00	64.00	69.00	65.00	68.50	73.25	75.00	66.88

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1981-82

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	70.00	69.25	68.00	68.00	68.00	68.00	72.00	72.40	75.00	75.00	75.00	75.00	71.34
Hyderabad	75.00	84.12	82.62	82.50	77.50	75.88	82.00	82.00	82.00	82.00	81.50	82.50	80.00
Sukkur	77.25	76.66	80.00	84.00	86.18	81.50	78.00	78.00	78.00	78.00	78.00	78.00	79.47
Lahore	105.06	105.00	105.50	105.00	105.00	100.00	95.75	96.75	100.00	97.80	98.00	98.00	100.87
Multan	100.00	97.25	105.00	105.00	102.50	98.00	95.00	95.00	95.00	95.00	95.00	95.00	90.23
Faisalabad	98.75	101.50	99.25	107.33	107.66	96.00	104.50	106.00	101.75	99.20	93.50	104.00	101.62
Rawalpindi	105.00	112.50	105.00	167.00	105.50	112.00	102.50	100.00	100.00	100.00	102.50	105.00	104.75
Peshawar	94.00	95.00	100.00	100.00	110.00	105.00	135.00	135.00	105.00	105.00	105.00	105.00	107.83
Quetta	82.50	86.83	91.00	91.00	92.33	91.00	90.00	90.50	90.33	89.66	92.25	91.62	89.88
Gujranwala	90.00	96.00	96.00	97.50	100.00	92.50	90.00	92.00	92.00	92.00	91.50	92.00	93.46
Sheikhupura	100.00	101.00	107.75	97.50	87.50	92.00	92.00	107.33	116.00	110.00	112.50	104.00	102.30
Sialkot	95.00	98.00	97.50	102.50	100.50	95.00	93.50	100.00	112.25	96.25	95.75	93.50	98.56
Okara	84.50	84.25	85.00	85.00	87.00	87.00	87.00	95.00	96.50	98.00	98.00	98.00	93.35
Jacobabad	72.75	70.00	70.00	70.00	90.00	90.00	90.00	90.00	85.00	85.00	85.00	85.00	81.90
Larkana	65.75	71.66	76.50	71.37	68.25	71.25	70.75	71.00	71.75	74.00	75.00	75.00	71.93
Dabu	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	82.00	84.25	85.00	85.00	81.35
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	90.00	92.25	90.00	90.00	100.00	90.00	90.00	88.33	87.88	90.00	90.00	90.00	91.54
Bahawalnagar	110.00	113.33	115.00	110.00	110.00	84.00	83.00	83.00	86.00	92.00	96.00	98.00	98.36

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1981-82

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	60.00	65.00	62.00	68.00	69.00	69.00	70.00	72.00	72.00	72.00	72.00	72.00	68.00
Hyderabad	62.87	70.50	72.00	66.83	70.83	68.62	66.12	68.50	69.33	69.18	72.50	71.50	69.07
Sukkur	50.00	71.66	65.00	60.00	70.00	55.00	60.00	61.00	65.00	68.75	69.00	63.50	62.91
Lahore	68.75	71.67	85.00	81.00	85.00	69.50	68.00	68.00	68.00	68.00	73.00	75.50	73.45
Multan	73.05	75.00	75.00	75.00	76.61	72.50	70.00	65.50	65.50	68.85	67.50	67.50	71.67
Faisalabad	75.00	75.00	75.00	74.33	76.75	72.50	78.25	76.00	76.00	76.00	76.00	76.00	75.60
Rawalpindi	68.00	71.00	73.00	75.00	75.00	75.00	73.33	70.00	75.00	70.00	64.50	75.00	72.07
Peshawar	70.00	70.00	70.00	70.00	75.00	76.50	78.50	80.00	80.00	80.00	80.50	82.00	76.04
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	71.50	68.00	69.33	64.25	64.00	60.00	60.16	62.50	65.00	63.67	61.50	68.00	64.83
Jacobabad	47.25	51.25	69.00	69.00	60.00	65.00	65.00	65.00	70.00	70.00	67.50	65.00	63.67
Larkana	47.50	51.33	57.12	56.62	57.50	59.00	59.12	60.25	59.50	59.00	61.00	59.50	57.29
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	72.00	72.75	73.00	76.00	75.50	71.50	72.00	72.00	70.50	73.50	66.00	72.50	72.27
Bahawalnagar	71.00	75.00	78.00	80.00	80.00	77.50	74.50	76.00	78.00	72.00	75.00	69.00	75.50

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1982-83

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	79.75	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00	85.48
Hyderabad	86.00	93.00	94.87	95.00	95.00	100.00	98.33	103.33	102.00	90.00	97.50	95.50	95.88
Sukkur	78.00	78.00	115.00	110.00	95.00	100.00	95.00	105.00	110.00	105.00	100.00	100.00	99.25
Lahore	98.00	98.00	98.00	98.00	98.00	98.00	98.75	102.00	105.00	109.00	112.00	108.00	101.90
Mirhan	97.50	105.00	105.00	105.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.50	100.92
Faisalabad	100.25	104.50	101.00	101.25	104.00	104.00	107.50	104.25	100.00	106.00	105.25	104.50	103.54
Rawalpindi	105.00	105.00	105.00	105.00	105.00	105.00	110.00	110.00	110.00	100.00	110.00	113.40	106.95
Peshawar	135.00	135.00	135.00	146.25	150.00	150.00	150.00	150.00	150.00	142.50	132.50	135.00	131.35
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	94.00	93.50	96.00	96.50	98.50	96.00	96.00	91.00	97.00	95.00	98.67	106.67	96.65
Sheikhupura	105.25	114.50	115.00	110.00	108.00	100.00	104.00	104.00	102.50	103.00	106.50	104.13	106.41
Sialkot	94.00	94.00	90.00	94.33	96.67	100.00	95.00	100.00	93.33	105.00	105.00	101.50	97.47
Okara	98.00	98.00	97.00	98.00	98.00	98.00	102.67	106.00	98.00	94.67	97.00	98.00	98.61
Jacobabad	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	100.00	100.00	100.00	107.50
Larkana	-	-	-	-	-	-	-	-	-	-	-	-	-
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	98.75	90.00	90.00	90.00	90.00	90.00	94.00	97.50	97.50	106.00	102.50	102.50	94.90
Bahawalnagar	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1982-83

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	75.00	76.50	76.40	76.00	73.60	73.25	77.25	80.00	80.00	80.00	80.00	82.50	77.54
Hyderabad	65.00	65.00	70.00	77.50	77.00	80.00	80.00	90.00	70.00	70.00	67.87	70.00	73.53
Sukkur	65.00	75.00	74.50	74.00	71.25	70.00	65.50	64.00	64.50	66.25	70.00	70.00	69.17
Lahore	74.50	81.00	81.00	81.00	76.00	74.00	74.00	76.00	76.00	76.00	76.00	76.00	76.79
Multan	70.00	70.00	66.75	78.50	73.50	82.85	82.85	84.00	75.00	75.00	75.00	65.00	74.87
Faisalabad	76.00	76.00	79.00	78.00	77.63	78.00	78.00	76.00	74.00	74.00	76.00	75.50	76.43
Rawalpindi	75.00	75.00	76.25	80.67	75.00	74.00	74.00	77.50	70.00	70.00	71.67	72.50	74.50
Peshawar	80.50	80.00	82.00	84.25	85.00	85.00	85.00	84.50	85.00	85.00	62.75	65.00	80.42
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	75.00	72.00	72.00	77.50	72.00	72.00	74.00	72.83	70.00	66.25	70.00	91.00	73.92
Jacobabad	70.00	68.00	65.00	65.00	65.00	60.00	60.00	60.00	60.00	60.00	62.50	75.00	64.21
Larkana	62.50	61.87	61.50	60.00	57.50	59.50	59.50	56.25	59.00	55.50	55.60	55.00	58.84
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	72.00	74.00	72.00	72.00	72.00	72.00	72.00	72.00	76.00	74.00	75.00	74.00	73.17
Bahawalnagar	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1983-84

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	86.00	86.00	86.00	86.00	85.00	85.42	85.00	85.00	85.00	85.00	85.00	85.00	85.36
Hyderabad	96.00	97.25	98.25	93.75	100.00	96.80	92.00	92.00	92.00	92.00	92.00	92.00	94.50
Sukkur	88.00	88.00	88.00	88.00	88.00	88.00	88.00	94.00	100.00	100.00	100.00	100.00	92.50
Lahore	108.00	108.00	108.00	108.00	100.00	100.00	100.00	100.00	118.75	125.00	125.00	125.00	119.28
Multan	102.50	100.00	102.80	103.00	103.00	101.60	100.00	100.00	100.00	99.75	99.20	103.75	101.30
Faisalabad	109.67	112.25	109.25	109.75	98.25	98.80	106.25	106.00	107.75	107.75	107.60	113.50	107.23
Rawalpindi	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.40	115.00	115.03
Peshawar	100.00	100.00	100.00	100.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	123.33
Quetta	106.25	105.25	107.00	105.88	108.00	105.40	105.75	105.00	103.00	103.25	104.20	104.25	105.27
Gujranwala	98.00	96.00	83.00	86.50	100.00	98.00	94.50	95.00	102.50	105.00	105.50	105.50	97.46
Sheikhupura	110.00	104.00	110.00	103.00	110.00	110.00	110.00	117.50	120.00	125.00	120.00	116.25	112.98
Sialkot	110.00	112.50	112.75	125.00	107.50	101.25	104.75	105.50	105.75	108.00	110.50	109.00	109.37
Okara	104.00	104.00	104.00	98.00	98.00	101.00	102.00	100.75	107.50	106.00	99.50	98.00	101.89
Jacobabad	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Larkana	90.00	90.00	90.00	87.00	86.50	85.75	87.50	87.25	87.50	87.16	90.50	91.25	88.36
Dabu	85.00	90.00	90.00	90.00	90.00	88.75	90.00	90.00	90.00	90.00	90.00	92.50	89.69
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	95.00	104.00	110.00	90.00	93.00	92.60	95.86	104.00	104.25	99.00	99.00	116.25	100.25
Bahawalnagar	110.00	140.00	115.00	115.00	110.00	110.00	115.00	110.00	112.00	114.50	113.25	119.26	136.17

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1983-84

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	-	-	-	-	-	71.00	-	71.00	71.00	71.50	71.50	73.00	71.33
Hyderabad	93.00	92.25	72.50	75.00	75.33	74.00	77.75	78.37	78.75	79.35	84.00	90.00	80.02
Sukkur	70.00	70.00	75.00	76.88	77.50	74.00	71.87	70.00	70.00	71.75	72.50	75.00	72.82
Lahore	76.00	75.50	74.00	75.00	76.00	76.25	73.60	74.00	74.00	74.00	75.33	76.00	74.97
Multan	65.00	77.33	75.50	75.50	75.00	76.00	75.00	75.00	77.50	80.00	81.00	101.00	77.82
Faisalabad	60.00	65.00	70.00	62.50	65.00	65.00	70.00	72.00	72.33	83.00	82.00	82.00	70.65
Rawalpindi	71.67	76.25	70.00	70.00	71.25	68.33	66.25	70.00	67.50	70.00	68.75	68.33	69.86
Peshawar	67.25	71.00	72.00	72.00	74.25	75.00	75.50	92.00	76.00	76.00	78.50	85.00	76.27
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	70.00	70.00	70.00	70.00	70.50	62.50	61.25	61.00	66.00	64.00	65.75	64.50	66.29
Okara	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacobabad	66.00	69.00	65.00	62.00	63.00	64.00	65.00	66.00	68.12	69.50	69.75	68.75	66.51
Larkana	62.00	61.50	61.25	61.25	61.25	61.25	63.87	63.62	69.50	69.33	67.00	80.50	65.19
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	78.67	61.25	61.50	72.00	73.00	73.00	74.00	75.00	75.00	77.50	76.00	69.00	72.16
Bahawalnagar	90.00	85.00	85.00	75.00	71.50	70.00	70.00	70.00	70.00	68.50	69.00	70.00	74.50

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (WHOLE) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1984-85

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	87.75	96.00	96.00	96.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	91.31
Hyderabad	98.00	100.25	102.50	97.12	98.75	94.00	94.75	94.50	94.12	97.00	97.00	95.50	96.54
Sukkur	102.75	107.50	115.83	118.75	114.37	97.50	97.50	113.75	95.00	105.00	120.00	102.50	107.54
Lahore	125.00	125.00	131.75	125.00	105.00	100.00	103.25	108.25	111.50	114.00	111.80	111.00	114.30
Multan	105.75	112.00	113.50	107.00	98.00	102.25	108.25	102.75	104.50	105.00	105.00	110.75	106.27
Faisalabad	114.00	118.00	118.00	117.33	102.20	101.25	109.00	115.00	114.50	109.75	108.80	111.00	111.57
Rawalpindi	117.50	125.00	125.00	125.00	125.00	117.50	105.00	109.00	115.00	115.00	115.00	115.00	117.42
Peshawar	130.00	140.00	139.00	139.25	140.00	140.00	140.00	140.00	140.00	135.00	135.00	135.00	137.77
Quetta	104.50	121.25	120.00	114.00	107.12	105.00	105.12	104.00	104.00	103.50	104.50	106.50	108.29
Gujranwala	112.00	114.25	103.75	105.00	93.25	92.25	93.00	96.66	98.00	98.00	105.75	119.25	102.64
Sheikhupura	117.50	118.75	119.25	116.87	104.66	111.25	97.25	103.13	105.00	106.00	105.00	105.00	109.18
Sialkot	115.00	115.50	116.75	110.75	100.30	97.25	103.75	103.00	104.80	114.00	108.50	109.00	108.47
Okara	108.50	110.00	113.33	110.00	112.50	110.00	110.00	110.00	111.00	112.00	113.00	96.00	109.69
Jacobabad	90.00	90.00	90.00	90.00	90.25	90.50	90.00	91.00	90.00	90.00	90.00	90.00	90.15
Larkana	92.16	91.12	95.00	94.62	84.50	85.62	85.00	85.62	86.00	88.00	86.50	90.00	88.68
Dabu	105.00	110.00	110.00	110.00	110.00	85.00	80.00	100.00	100.00	100.00	101.50	100.00	100.96
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	108.25	130.00	118.69	119.00	110.50	105.00	112.50	107.50	105.00	111.00	112.50	107.50	112.29
Bahawalnagar	115.00	125.00	140.00	135.00	140.00	133.33	113.33	110.00	100.00	112.50	120.00	100.00	120.35

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

MONTHLY AVERAGE WHOLESALE PRICES OF IRRI (BROKEN) IN THE MAIN PRODUCING
AND CONSUMING MARKETS OF PAKISTAN DURING 1984-85

(Wholesale prices in Rs. per 40 kg.)

Markets	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
Karachi	85.75	88.00	88.00	88.00	86.00	-	-	-	-	-	-	-	87.15
Hyderabad	92.50	96.25	91.25	91.87	89.75	78.50	83.37	85.00	83.00	84.50	83.50	85.50	87.08
Sukkur	81.25	87.50	87.50	87.50	87.25	87.66	92.50	84.88	80.00	80.00	78.25	77.50	84.36
Lahore	76.00	98.00	78.90	76.00	78.00	79.50	81.00	84.00	84.00	85.00	85.00	85.00	76.37
Multan	107.50	112.92	117.50	105.00	90.00	-	-	-	-	-	-	-	106.58
Faisalabad	68.75	71.25	75.00	76.00	73.12	80.00	80.00	80.00	81.00	82.50	82.50	90.00	78.34
Rawalpindi	70.00	94.25	110.00	110.00	75.00	92.50	87.40	88.25	95.50	92.25	72.50	73.85	88.50
Peshawar	-	-	-	-	-	-	-	-	-	-	-	-	-
Quetta	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujranwala	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheikhupura	-	-	-	-	-	-	-	-	-	-	-	-	-
Sialkot	-	-	-	-	-	-	-	-	-	-	-	-	-
Okara	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacobabad	73.12	82.50	82.50	80.00	79.25	72.00	72.00	71.00	72.75	75.00	74.50	74.00	75.72
Larkana	72.83	80.12	81.75	78.00	74.75	72.82	71.25	71.12	71.83	71.80	71.00	72.50	74.11
Dabu	-	-	-	-	-	-	-	-	-	-	-	-	-
Gujrat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sargodha	75.00	101.25	103.65	95.00	71.25	75.00	78.00	77.50	79.50	76.00	67.50	71.00	80.89
Bahawalnagar	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Agricultural Marketing & Grading Department,
Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF
(BASMATI) IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1980-1981

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1980	5.60	5.00	4.56	5.25	5.21	4.50	5.19	5.60	6.02	5.21
August	5.60	5.25	5.00	5.50	5.50	4.94	5.75	6.00	6.50	5.56
September	5.60	5.37	5.25	5.50	6.00	5.50	5.75	6.56	6.75	5.81
October	5.60	5.50	5.80	5.76	6.17	5.50	5.78	7.00	6.75	5.98
November	5.60	5.50	6.12	6.58	7.00	5.50	6.00	7.00	6.83	6.24
December	5.60	5.60	6.25	6.87	6.75	5.50	6.25	7.00	7.00	6.31
January, 1981	6.09	6.00	6.00	7.00	6.50	5.50	6.82	7.00	7.00	6.21
February	6.88	6.25	6.25	7.00	6.50	5.94	6.80	7.00	7.00	6.62
March	7.50	6.50	6.50	7.00	6.50	6.00	7.00	7.00	7.06	6.78
April	7.50	6.63	6.50	7.00	6.09	6.00	6.75	7.00	7.14	6.73
May	7.50	6.75	6.37	7.00	6.50	6.00	6.75	7.00	7.50	6.82
June	7.50	6.87	6.50	7.00	6.50	6.00	6.75	7.00	7.00	6.79
Average	6.38	5.94	5.93	6.46	6.27	5.41	6.30	6.76	6.88	6.26

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF RICE
(BASMATI) IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1981-82

Markets	(Prices in Rs. per Kg.)									
	Karachi	Hyderabad	Sukkur	Multan	Faisalabad	Lahore	Rawalpindi	Peshawar	Quetta	Average
July, 1981	7.50	6.50	7.00	7.00	6.50	6.00	6.87	7.00	7.00	6.81
August	7.50	7.12	7.00	6.94	6.50	6.19	7.25	7.37	7.00	6.98
September	7.50	7.50	7.25	7.00	6.88	6.25	7.25	8.00	7.22	7.20
October	7.50	7.50	7.25	7.00	7.00	6.25	7.25	8.00	7.50	7.25
November	7.50	7.50	7.50	7.00	7.00	6.25	7.45	8.00	7.50	7.30
December	7.50	7.50	7.50	6.41	5.87	6.17	7.50	8.00	7.50	7.30
January, 1982	7.50	7.50	7.50	6.25	6.37	6.00	7.50	8.00	7.50	7.15
February	8.00	7.50	7.50	6.37	6.50	6.00	7.50	8.00	7.50	7.20
March	8.00	7.50	7.50	6.75	6.65	5.98	7.50	8.00	7.50	7.26
April	8.00	7.50	7.50	6.75	6.50	6.98	7.50	8.00	7.65	7.37
May	8.00	7.50	7.50	6.75	6.50	7.00	7.50	8.00	7.62	7.37
June	8.00	7.50	7.50	6.75	6.56	6.85	7.50	8.00	7.94	7.40
Average	7.72	7.38	7.37	6.75	6.57	6.32	7.35	7.83	7.45	7.21
									National Average:	7.21

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF RICE
(BASMATI) IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1982-83

Markets	(Prices in Rs. per Kg.)									
	Karachi	Hyderabad	Sukkur	Multan	Faisalabad	Lahore	Rawalpindi	Peshawar	Quetta	Average
July, 1982	7.95	7.48	7.50	6.81	6.50	6.85	7.50	8.00	7.93	7.39
August	8.50	8.00	7.50	7.00	7.00	6.85	7.50	8.00	8.25	7.62
September	8.40	8.00	7.50	7.00	6.75	6.25	7.50	8.00	8.25	7.52
October	8.50	8.00	7.50	7.00	6.75	6.25	7.50	8.37	8.28	7.56
November	8.50	8.00	7.50	7.00	6.75	6.34	7.50	8.50	8.25	7.59
December	8.50	8.00	7.50	6.79	7.00	6.50	7.50	8.50	8.25	7.62
January, 1983	8.25	8.00	7.50	6.50	6.95	6.37	7.50	8.50	8.25	7.54
February	8.37	8.00	7.50	6.50	6.81	5.88	7.50	8.50	8.25	7.48
March	8.00	8.00	7.50	6.50	6.82	5.72	7.50	8.50	8.50	7.46
April	8.00	8.00	7.50	6.50	7.00	5.75	7.50	8.50	8.50	7.56
May	8.00	8.00	7.50	6.50	7.00	5.75	7.50	8.50	8.50	7.56
June	8.00	8.00	7.50	6.50	7.00	5.95	7.67	8.50	8.50	7.51
Average	8.25	7.96	7.50	6.72	6.86	6.21	7.51	8.36	8.31	7.52
								National Average:		<u>7.52</u>

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

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STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF RICE
(BASMATI) IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1983-84

Markets	(Prices in Rs. per Kg.)									
	Karachi	Hyderabad	Sukkur	Multan	Faisalabad	Lahore	Rawalpindi	Peshawar	Quetta	Average
July, 1983	8.00	8.00	7.50	6.50	7.00	6.03	7.75	8.50	8.50	8.50
August	8.00	8.00	7.50	6.50	7.00	6.00	7.75	8.50	8.50	8.50
September	8.00	8.05	7.50	6.52	7.05	6.00	7.75	8.50	8.45	8.45
October	8.00	8.00	7.50	6.50	7.00	6.00	7.75	8.50	8.50	8.50
November	8.00	8.00	7.50	6.52	6.56	6.37	7.75	8.50	8.49	8.49
December	8.20	8.00	7.50	6.50	6.31	7.50	7.37	8.50	8.50	8.50
January, 1984	8.12	8.00	7.50	6.50	6.41	7.50	7.12	8.50	8.25	8.25
February	8.00	7.50	7.50	6.50	6.18	7.50	7.50	8.50	8.50	8.50
March	8.50	7.48	7.50	6.88	6.45	8.25	7.48	8.50	8.49	8.49
April	8.50	7.50	7.50	6.50	6.50	8.50	7.50	8.50	8.33	8.33
May	8.50	7.10	7.50	6.50	6.30	8.15	7.50	8.50	8.19	8.19
June	8.00	7.00	7.50	6.52	6.37	6.75	7.50	8.50	8.50	8.50
Average	8.15	7.72	7.50	6.54	6.59	7.05	7.56	8.50	8.43	8.43

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF RICE
(BASMATI) IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1984-85

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1984	8.00	7.67	7.50	6.50	6.50	6.75	7.63	8.50	8.50	8.50
August	8.05	8.00	7.50	6.55	6.52	6.95	8.00	8.50	8.48	8.48
September	8.00	8.00	7.50	6.50	6.68	7.63	8.00	8.50	8.98	8.98
October	7.99	8.00	7.50	6.49	6.67	8.00	8.00	8.25	8.50	8.50
November	8.00	8.01	7.50	6.48	6.70	7.80	8.00	8.00	8.49	8.49
December	8.00	8.00	7.50	6.60	6.50	7.50	7.63	8.00	8.96	8.96
January, 1985	8.50	8.00	7.56	6.48	6.35	7.31	7.00	8.00	8.35	8.35
February	8.49	8.00	7.75	6.50	6.50	7.36	7.00	8.00	8.25	8.25
March	8.48	7.99	7.75	6.50	6.50	7.87	7.02	8.00	8.43	8.43
April	8.49	7.96	7.75	6.50	6.48	7.69	7.02	8.00	8.50	8.50
May	8.48	7.96	7.75	6.68	6.60	7.50	8.00	8.00	8.50	8.50
June	8.37	8.12	7.75	6.88	6.75	7.12	8.00	8.00	8.49	8.49
Average	8.24	7.98	7.61	6.56	6.56	7.46	7.61	8.15	8.45	8.45

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF
RICE IRRI-6 IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1980-81

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1980	2.12	2.00	1.62	2.60	2.60	2.50	2.56	3.00	2.60	2.40
August	2.12	2.03	1.76	3.50	2.79	2.69	2.56	3.00	2.75	2.58
September	2.12	2.00	1.82	3.44	2.62	3.00	2.75	3.57	2.75	2.67
October	2.12	2.00	1.84	3.30	2.56	3.00	2.90	4.00	2.75	2.72
November	2.12	2.00	1.90	3.41	3.00	3.00	3.00	4.00	2.83	2.81
December	2.12	2.00	1.87	3.42	3.00	3.00	3.31	4.00	3.00	9.86
January, 1981	2.41	2.00	1.90	2.75	3.50	3.00	3.94	4.00	3.00	2.94
February	2.56	2.00	1.90	3.00	3.70	3.22	3.80	3.56	3.00	2.97
March	2.75	2.00	1.93	3.25	3.33	3.25	3.44	3.50	3.00	2.94
April	2.75	2.00	1.88	3.25	3.08	3.25	3.13	3.50	3.00	2.87
May	2.75	2.25	2.00	3.25	3.44	3.25	3.00	3.50	3.00	2.94
June	2.75	2.25	2.00	3.25	3.25	3.25	3.00	3.50	3.00	2.92
Average	2.39	2.04	1.87	3.20	3.07	3.03	3.12	3.59	2.89	2.80

National Average : 2.80

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF RICE IRR1-6 IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1981-82

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1981	2.75	2.25	2.00	3.31	3.25	3.25	3.12	3.50	3.00	2.93
August	2.75	2.31	2.00	3.00	3.25	3.25	3.37	3.59	3.00	2.94
September	2.75	2.50	2.12	3.25	3.25	3.25	3.25	3.75	3.25	3.04
October	2.75	2.25	2.00	3.25	3.25	3.25	3.25	3.50	3.50	3.00
November	2.75	2.25	2.25	3.18	3.50	3.25	3.25	3.50	3.50	3.04
December	2.75	2.25	2.25	3.00	2.50	3.25	3.25	3.50	3.50	2.91
January, 1982	2.75	2.25	2.25	3.00	3.25	3.25	3.12	3.50	3.50	3.98
February	2.75	2.25	2.25	3.00	3.44	3.31	3.00	3.50	3.50	3.01
March	2.75	2.25	2.25	3.00	3.50	3.50	3.00	3.50	3.50	3.02
April	2.75	2.25	2.25	3.00	3.25	3.50	3.00	3.50	3.50	3.01
May	2.75	2.25	2.25	3.00	3.06	3.50	3.00	3.50	3.50	2.97
June	2.75	2.25	2.25	3.00	3.37	3.50	3.00	3.50	3.50	3.01
Average	2.75	2.27	2.17	3.08	3.84	3.33	3.13	3.52	3.12	3.04
								National Average:		3.04

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF
RICE IRRI-6 IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1982-83

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1982	2.75	2.31	2.25	3.03	3.52	3.50	3.00	3.50	3.56	2.99
August	3.00	2.50	2.25	3.12	3.37	3.50	3.00	3.50	3.90	3.13
September	3.00	2.50	2.25	3.12	3.50	3.50	3.00	3.50	4.00	3.10
October	3.00	2.50	2.25	3.12	3.12	3.50	3.00	4.00	4.00	3.16
November	3.00	2.50	2.25	3.00	3.25	3.50	3.00	4.00	4.00	3.16
December	3.00	2.50	2.25	3.00	3.50	3.50	3.00	4.00	4.00	3.19
January, 1983	3.00	2.50	2.25	3.00	3.50	3.50	3.23	4.00	4.00	3.22
February	3.00	2.50	2.25	3.00	3.77	3.50	3.25	4.00	4.00	3.21
March	3.00	2.50	2.25	3.00	3.00	3.50	3.25	4.00	4.00	3.17
April	3.00	2.50	2.25	3.00	3.28	3.50	3.31	3.88	4.00	3.19
May	3.00	2.50	2.50	3.00	2.75	3.58	3.25	3.88	4.00	
June	3.00	2.71	2.50	3.20	3.25	3.50	3.42	4.00	4.00	
Average	2.98	2.50	2.50	3.05	3.31	3.54	3.14	3.89	3.95	

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF
RICE IRRI-6 IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1983-84

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1983	3.00	2.75	2.50	3.00	3.25	3.50	3.37	4.00	4.00	3.29
August	3.00	2.75	2.50	3.00	3.44	3.50	3.25	4.00	4.00	
September	3.00	2.75	2.50	3.00	3.50	3.50	3.25	4.00	4.00	
October	3.12	2.75	2.50	3.00	3.50	3.50	3.25	4.00	4.00	
November	3.50	2.75	2.50	3.00	3.06	3.50	3.25	4.00	4.00	
December	3.50	2.75	2.55	3.00	3.06	3.50	3.25	4.00	4.00	
January, 1984	3.50	2.75	2.50	3.00	3.50	3.50	3.25	4.00	4.00	
February	3.50	2.75	2.63	3.00	3.50	3.50	3.25	4.00	4.00	
March	3.50	2.75	2.75	3.00	3.50	4.25	3.25	4.00	4.00	
April	3.50	2.75	2.75	3.00	3.43	4.50	3.25	4.00	4.00	
May	3.50	2.75	2.75	3.00	3.32	4.50	3.30	4.00	4.00	
June	3.25	2.75	2.75	3.00	3.50	4.50	3.25	4.00	4.00	
Average	3.32	2.75	2.59	3.00	3.38	3.81	3.26	4.00	4.00	

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

STATEMENT SHOWING THE MONTHLY AVERAGE RETAIL PRICES OF
RICE IRRI-6 IN IMPORTANT MARKETS OF PAKISTAN DURING THE YEAR 1984-85

(Prices in Rs. per Kg.)

<u>Markets</u>	<u>Karachi</u>	<u>Hyderabad</u>	<u>Sukkur</u>	<u>Multan</u>	<u>Faisalabad</u>	<u>Lahore</u>	<u>Rawalpindi</u>	<u>Peshawar</u>	<u>Quetta</u>	<u>Average</u>
July, 1984	3.25	2.92	2.75	3.00	3.50	4.50	3.31	4.00	4.00	4.00
August	3.25	3.00	2.75	3.20	3.75	4.50	3.50	4.00	4.35	4.35
September	3.25	3.00	3.13	3.50	3.71	4.81	3.50	4.00	4.50	4.50
October	3.25	3.00	3.50	3.25	3.75	4.75	3.50	4.00	4.29	4.29
November	3.50	3.00	3.50	3.00	3.15	4.30	3.50	4.00	4.00	4.00
December	3.50	3.00	3.50	3.00	3.00	4.00	3.31	4.00	4.00	4.00
January, 1985	3.50	3.00	3.50	3.11	3.50	4.25	3.00	4.00	4.00	4.00
February	3.50	3.00	3.50	3.00	3.50	4.50	3.18	4.00	4.00	4.00
March	3.50	3.00	3.50	3.00	3.50	4.50	3.50	4.00	4.00	4.00
April	3.25	3.00	3.50	3.00	3.50	4.50	3.50	4.00	4.00	4.00
May	3.50	3.00	3.50	3.00	3.30	4.50	3.50	4.00	4.00	4.00
June	3.48	3.06	3.50	3.08	3.37	4.50	3.50	4.00	4.00	4.00
Average	3.39	3.00	3.34	3.10	3.46	4.47	3.40	4.00	4.10	4.10

SOURCE: Agricultural Marketing & Grading Department, Government of Pakistan

APPENDIX D

Improvement Plan for Paddy/Rice Storage

Improvement Plan for Paddy/Rice Storage

Basic Improvement Concept

As mentioned in the preceding sections, there are major problems in the present paddy/rice storage in Pakistan. They are:

- i) heavy losses of paddy stored in open space at rice mills in Punjab and
- ii) expected losses of rice caused by the shortage of storage space in RECP.

Additionally, consideration of the problems should involve the lease of the temporary godowns to RECP and rice millers in Punjab through PASSCO.

The construction of the conventional grain warehouses, made of concrete or brick, are not included in this report because:

- i) the shortage of storage space in RECP godowns is temporary and an investment in permanent structures may become useless, and
- ii) the conventional warehouses lack mobility. Lease of godowns allows more flexibility and greater savings.

Detailed Features of the Improvements

The temporary godown will be the quick-assemble-disassemble type with polyester covering, rust-proof framework and rails. This godown can be assembled with a crane truck a few hours after unloading from the track. The frame, with covering, can be folded into a compact crate for easy storage and transportation.

The godown will be a house-type with dimensions of 8m x 10m and a height clearance of 3.8m. It will be used as workers' quarters, a workshop factory, an office and disaster shelter as well as a warehouse for food grains, making the lease-business of PASSCO more financially sound.

The total number of godowns necessary for paddy storage in mills is estimated at about 220 based on the following assumption.

- i) Total number of working sheller-type rice mills in Punjab: 130
- ii) The average processed paddy per mill per year: 3,500 tons
- iii) Necessary storage space per mill: 70% of the total processed paddy
- iv) Expected percent of mills which might borrow the temporary godowns of PASSCO: 10%

- v) Storage volume of the godown: 264 m³
- vi) Effective storage space of the godown: 95% of the total volume
- vii) Bulk density of paddy: 576 kg/m³

Economic Evaluation of the Improvement

a) Costs

The initial investment cost of a godown is estimated at \$9,515, which is amortized at \$1,684/year with an interest rate of 12% and a project life of 10 years. The cost breakdowns are as follows.

Temporary godown

F.O.B. Tokyo	\$ 8,250
Freight (Japan-Karachi)	\$ 843
Insurance	\$ 140
Handling charge at the port	\$ 210
Inland transportation cost (Karachi - Lahore)	\$ 24
C.I.F. Lahore	\$ 9,467
C.I.F. Lahore (economic cost)	\$ 9,430

Crane track (2.2 tons loading capacity with 2.2 ton crane, 220 godowns/track)

F.O.B. Tokyo	\$15,000
Freight (Japan - Karachi)	\$ 2,700
Insurance	\$ 300
Handling charge at the port	\$ 700
Inland transportation cost (Karachi - Lahore)	\$18,780
C.I.F. Lahore (economic cost)	(\$85/godown)

Operation & maintenance costs

Salary and allowance

1 Driver (chief)	Rs.2,700/month
1 Driver (assistant)	Rs.2,100/month
3 Cleaners	<u>Rs.2,850/month</u>
	Rs.7,650/month

Rs.417/year/godown

Repair and garage costs of the tank	Rs. 89/year/godown
Fuel (3 km/litre Rs.4.25/litre, 50 km/godown)	Rs. 71
Lubricant (30% of fuel cost)	Rs. 21

The annual economic cost of a godown including the amortized initial cost is estimated at \$1,718 (Rs.27,482).

b) Benefit

Benefits from the improvements in paddy storage are evaluated in terms of savings in storage losses of paddy in a mill.

The reduction in storage losses is estimated at 3.1%, i.e. from 3.67% to 0.57% as shown in Section 1.4. The economic price of paddy in a mill is estimated at Rs.6,309/ton as calculated in the following table.

Economic Price of Paddy

. Price of rice projected for 1995 in 1985 values (F.O.B. Bangkok)		
	\$319/ton	
. Price of rice (Basmati) projected for 1995 in 1985 values (F.O.B. Karachi)		
	\$654/ton	Rs.10,463/ton
. Cost of gunny bags, Rs.13/bag x 22 bags, double bags		Rs. 286/ton
. Reprocessing cost		Rs. 115/ton
. Handling costs at Karachi & Lahore		Rs. 50/ton
. Transportation (Lahore - Karachi)		Rs. 280/ton
. Milling cost		Rs. 110/ton
. Total costs		Rs. 841/ton
. Economic cost, (standard conversion factor = 0.9)		Rs. 757/ton
. Price of paddy at a mill (milling recovery, 0.65)		Rs. <u>6,309/ton</u>

Remark: Export price of Basmati in the last 4 years was 105% higher than the export price of Thai rice of 5% broken.

The economic benefit of the improvement is calculated at Rs. 28,359 (\$1,772)/year, 145 tons x 3.1/100 x Rs. 6,309/ton.

From the viewpoint of the national economy, the introduction of temporary godown is economically feasible, even when taking the opportunity cost of the capital, i.e., interest at 12%/year, into consideration.

The financial benefit of the improvement is calculated at Rs.6,608 (Rs.1,470/ton & 145 tons x 3.1/100), which is far below the cost, Rs.27,638, because the current paddy price i.e. Rs.1,470/ton, is distorted heavily by rice monopoly policy.

The shortage of the benefit should be reimbursed by the Government.

APPEDIX E

Paddy Procurement Policy of Passco, 1984-1985

PADDY PROCUREMENT POLICY OF PASSCO, 1984 - 1985

1. General

PASSCO has again been given the assignment to procure paddy from the paddy growers of Sind and Baluchistan to adhere to the objective of Government to ensure support price to the growers. The main objectives of this operation are:

- a. To ensure minimum support price to the paddy grower.
- b. To ensure indirect support to the growers of the area.

i.e. increase in price in open market due to presence of PASSCO. PASSCO has been paying an amount of about Rs.12-13 Crores in cash to the paddy growers of this area since 1977. It has been a great help in up-grading the living standard of the farmers and increasing the paddy production.

- c. To pay the paddy price in cash immediately through various banks enabling the farmers to re-invest for further sowing of crops for boosting the agriculture production.

2. Paddy Procurement Areas/Target

In Sind and Baluchistan, the paddy producing area where production is surplus and the paddy price usually prevails below the supporting price, have been considered for paddy procurement to ensure the support price to the growers of the area. The areas where the paddy production is not surplus and paddy price usually prevails equal/above the supporting price have not been selected.

Since RECP has its modern rice plant having a capacity 15 tons in Shikarpur District, therefore paddy procurement will be managed by RECP in this area. Thus PASSCO shall manage paddy procurement in Dadu, Larkana and Jacobabad Districts of Sind and Nasirabad District of Baluchistan and procurement target shall approximately one lac tons of paddy.

3. Selection of Rice Mills

PASSCO do not have its own rice plants in Sind and Baluchistan. Private rice plants are to be hired every year on contract out of the stock available for this purpose.

A selection committee consisting upon the following officers was formed to survey the rice plants available for hiring in the area and select/suggest the best available rice plants for paddy milling operation:

- a. Khawaja Sajjad Haider, Controller of Inspection.
- b. Lt. Col. (Retd) Akhtar Russain, DGM(F) PASSCO Sahiwal.
- c. Mr. Maqbool Ahmad, DGM(Audit) PASSCO HQ Lahore.
- d. Zonal Head concerned (Jacobabad/Larkana).

The committee surveyed the whole area and recommended 14 (Fourteen) rice mills in Sind and Baluchistan. The mill owners were negotiated and the terms and conditions of all the rice mills were finalised as under:

<u>S.No.</u>	<u>Name of Rice Mills</u>	<u>Milling Capacity Per Hour</u>	<u>Contracted Qty. of Paddy (Mds)</u>
<u>JACOBABAD Zone</u>			
1.	Khawaja Ghareeb Nawaz Rice Mills, Jacobabad.	Two tons.	200,000 Mds.
2.	Umrani R.M. Usta Muhammad.	One ton.	100,000 "
3.	Jan Jamali R.M. "	One ton.	100,000 "
4.	Ghausia R.M. "	One ton.	100,000 "
5.	Sohbatpur R.M. Sohbatpur.	Two tons.	150,000 "
6.	Jhatpat R.M. Jhatpat.	One ton.	100,000 "
7.	Raza R.M. Khanpur.	One ton.	100,000 "
8.	Pooples R.M. Usta Muhammad.	One ton.	Open.
9.	Beeble R.M. Jacobabad.	Two tons.	Open.
10.	Haq Bahu R.M. Usta Muhammad.	One ton.	Open
<u>LARKANA Zone</u>			
1.	Raja R.M. Kambar.	One ton.	70,000 Mds.
2.	Muhammad Bachal R.M. Rato Dero.	One ton.	80,000 "
3.	Bismillah R.M. Rato Dero.	One ton.	60,000 "
4.	A.S.R. Mills Sindhi Butra(Dadu).	One ton.	70,000 "
5.	Shabir R.M. Kambar.	One ton.	-

4. Operational Set-up

There will be two zones i.e. Larkana and Jacobabad in Sind and Baluchistan during paddy operation 1984 - 85. SPM (Senior Project Manager) will be the incharge of the zones and will be directly controlled by the Head Office, Lahore. Larkana zone two projects with five rice mills whereas Jacobabad zone will comprise of Jacobabad and Nasirabad Districts and it will have three projects with ten rice mills.

5. Supervising Officers

- a. A board of the following officers will visit, inspect and exercise necessary control on procurement/milling/disposal of paddy/rice in Sind and Baluchistan during paddy operation 1984 - 85:

- i. Lt. Col.(Retd) M. Akhtar Hussain, DGM(F): President
- ii. Maj.(Retd) Shamim Shafqat Khan, DGM(I) : Member
- iii. A senior accounts officer to be detailed : Member by the GM(F & A).

- b. The board will visit various rice mills to check their operation and ensure that operation is conducted efficiently and effectively. They will also check the quality of paddy purchased, quality of products and in collaboration with the local zonal head will ensure timely disposal of paddy products both RECP dispatches and free sale on day to day prices on competitive rates.

- c. The zonal head will be overall incharge of procurement/milling/sales operation within their area of operation. The functions of supervising officers will be as under:

- i. Maintenance of vigilance of paddy procurement/milling/sales operation.
- ii. Ensure that quality of paddy procured is according to the prescribed standards.

- iii. Ensure that the lawful facilities are provided to the paddy growers of the area.
- iv. Ensure that security arrangements at rice mills/offices and precaution adopted against rain/storm are made and implemented.
- v. Ensure that the paddy sellers problems are properly listened to and settled accordingly.

6. Paddy Price

As desired in the meeting held on 2nd October, 1984 in the Head Office, the paddy will be procured at the support price announced/fixed by the Central Government on mill gate. However, necessary quality deductions will be imposed according to the specifications.

7. Paddy Procurement/Incidental Funds and Sale Procedure

Entire procurement/incidental funds will be arranged by Head Office. The GM(F & A) will arrange its remittance according to the requirements. Sale proceeds will not be utilized for this purpose. All sale proceeds will have to be remitted to Head Office immediate after its realization. The GM(F & A) will issue necessary instructions separately regarding accounting procedure.

8. Paddy Procurement/Milling Period

Paddy procurement will be started from 15th November 1984 and will continue till the 30th April, 1985 keeping in view the availability of paddy capable of running the mills upto 30th April, 1985. Every possible efforts will have to be made to finalize the paddy procurement within the stipulated period. Paddy milling should be completed by 30th April, 1985 in any case, to avoid maximum broken percentage.

9. Paddy procurement Pre-arrangements

Zonal/Project incharge should ensure that the proper maintenance of rice plant "PIR" preparation, store bardana and tarpaulines arrangements and labour, weighing scales have been made.

10. Paddy Procurement Procedure/Specifications

Paddy procurement specifications are given in Annexure (attached). A copy of these specifications duly translated into Urdu will be displayed at each paddy procurement point. All officers connected with the paddy purchase will acquaint themselves full with these specifications. The rice mill incharge and PM (Project Manager) concerned will ensure that the paddy is procured according to these specifications and quality allowance in amount is imposed accordingly. The PM and the mill incharge will jointly select paddy lot for procurement. Paddy analysis report will be prepared according to the specifications. Quality allowance will be imposed in shape of amount and the same will be deducted from the bill and net amount is paid through banks.

After preparation of the purchase bill, bank copy of the bill will be forwarded to the concerned bank alongwith the scroll from where the seller will collect his payment on presentation of his copy of the bill.

It will be the personal liability of the PM and the mill incharge to ensure the prompt and accurate payment to the paddy sellers.

11. Paddy Stacking/Drying

After procurement paddy should be stored in a proper way on raised places available in the mill premises of heaps of equal quantity of medium size. The proper record of heaps should be kept separately in heap register. Temperature inside the paddy heaps should be checked regularly by the PM and the mill incharge, so that proper replacement/drying/milling of paddy heaps may be done at proper time to avoid losses to heating of the grains.

Paddy should be dried by spreading it evenly and uniformly on well prepared plastered "PIR". The paddy should be stirred 3 - 4 times during the spreading the sun so that it may be dried uniformly. In the evening when the moisture percentage becomes 13 it should be lifted and shifted to rice plant paddy room. The paddy so dried should be milled on the next day.

12. Paddy milling

The PM/rice mill incharge should pay their personal attention to paddy husking. They should ensure that the special/FAQ rice being produced is of standard specifications. One PASSCO employee should supervise these operation constantly.

13. Filling of Rice and its Bi-products

Rice and its bi-products should be filled and inspected and stored regularly in a proper way and its entries be made in the relevant record daily basis.

14. R.E.C.P. Rice Dispatch Arrangements

Due to short supply of Railway wagons/NLC trucks, RECP rice is generally dispatched by private trucks to Pipri godowns in Karachi where the rice stock is analyzed, weighed and purchased by RECP people. The transport contract should be arranged with some transporter through inviting tenders. SPM/PM and the mill incharge will ensure prompt dispatches of RECP rice to accelerate the quick realization of sale proceeds.

The successful tenderer for transportation of rice to RECP Karachi will arrange services of cleaning agency at RECP godowns Karachi. He will manage to get the rice stock analyzed, weighed and delivered to RECP. He will maintain the complete record of dispatches/deliveries and will be responsible to collect and forward C.M.Cs to the respective zonal head on daily basis. In case rejection of a lot he will be responsible to intimate the respective head immediately.

15. Free Sale of Rice and its Bi-Products

The free sale of rice and its bi-product will be arranged by the respective zonal head through the Board constituted by Head Office. The disposal will be arranged after thorough exploration of the market.

16. Record Maintenance/Reports/Returns

Documentation of all the operation to be carried out during procurement/milling of paddy, is of great importance. Registers/Books needed for this purpose are being arranged and supplied for each rice mill/PM/SPM office SPM/PM and mill incharge will ensure that the documentations is done regularly/correctly and the Reports/Returns are submitted promptly/timely to Head Office.

Annexure

Paddy Specifications of IRRI-6 1984 - 85
Sind and Baluchistan

<u>Sr. No.</u>	<u>Item of Refraction</u>	<u>Tolerance Limit (%)</u>	<u>Rejection Limit (%)</u>	<u>Scale of Deduction</u>
1.	Moisture	16	18	At full value above.
2.	Admixture	3	5	At 1/2 value above 3%
3.	Red Rice	2	4	At full value above.
4.	Damaged/Shrivelled	2	5	- do -
5.	Dirt and Immature matter.	2	4	- do -
6.	Heat damaged grain	1	2	- do -

APPENDIX F

Salient Features of Rice Policy for the Scheme Year 1985-86

Punjab Province

SALIENT FEATURES OF RICE POLICY FOR THE SCHEME YEAR 1985 - 86

Punjab Food Department will procure rice of 1985 crop during 1985 - 86 Scheme for Rice Export Corporation of Pakistan under Monopoly Procurement Scheme. The "Salient Features" of the rice procurement policy 1985 - 86 would be as under:

Monopoly Procurement

1. Rice would be purchased through authorized rice dealers/millers from within the Scheduled Area of the Punjab under the conventional Monopoly Procurement Scheme. List of District comprising of Scheduled Area is placed at Annexure-1 and the District-wise targets at Annexure-II.
2. Growers may also tender rice direct to Government even in the lots of 30 and 60 bags. Such small lots would be pooled together by the Officer Incharge of purchase center for making a complete lot of 240 bags.
3. The growers would get their paddy husked only from authorized rice millers at the nearest purchase center, under intimation to the official of purchase center. 75% of rice thus milled would be tendered to Government only.

Legal Provisions

4. Punjab Paddy and Rice (Control) Order, 1981 would continue to remain in force.

Varieties of Rice to be Purchased

5. Basmati, IRRI-6 (premium grade) and KS-282 rice of 1985 crop would be purchased. KS-282 would be considered as par with IRRI-6 White (Premium) for the purpose of procurement. However, the ARDs would keep KS-282 paddy/rice separate from IRRI-6 and basmati rice so that no admixture of these varieties takes place.

6. Sela Basmati rice would be purchased on the same price as that of White Basmati. The premium of Rs.10/- per 40 kg would not be given this year except in the case of parboiled rice supplied by modern par-boiling plants. The Deputy Directors Food/District Food Controllers would ensure that in their Divisions/Districts par-boiled basmati sela rice will only be manufactured according to the allocated quantity of rice for each district so as to achieve the target of White Basmati.

Specification of Rice to be Procured

7. Basmati rice would continue to be procured under the specifications intimated last year; however, in case of IRRI-6/KS-282, the admixture of KS-282 in IRRI-6 upto the extent of 10% and vice versa would be considered as tolerance limit for rice crop 1985 - 86.

Banned Varieties

8. Banned varieties of rice viz Sathi, Permal, Mushkan, Hansraj (Bara), IRRI-Pak (IRRI-8), Mehran (IRRI-6), PK-196, PK-177, PK-178 and Nayab-6 (IRRI-9) rice shall not be purchased.

Support Price of Paddy and Procurement Price of Rice

9. The support prices of paddy and rice for the scheme year 1985 - 86 are as follows:

<u>Variety</u>	<u>Support Price of Paddy</u>	<u>Procurement Price of Rice</u>
i) Basmati (White)	Rs.93/-per 40 kg	Rs.166/-per 40 kg
ii) IRRI-6 (premium grade)/ KS-282	Rs.57/- " "	Rs. 95/- " "
iii) IRRI-6(FAQ)	Rs.53/- " "	Rs. 86/50 " "

10. 3.5 lac M.tons of Basmati rice and 1.5 lac M.tons of coarse rice would be procured from the Scheduled Area of the Punjab as detailed below:

i) Basmati rice (White)	3,00,000
ii) Basmati Sela	50,000
iii) IRRI-6/KS-282 (premium)	1,50,000
Total	<u>5,00,000</u>

11. Out of 50,000 M.tons of Basmati Sela, 25,000 M.tons will be supplied by the PNP Mills controlled by the RECP Karachi.

Free Sale Quota

12. Free sale quota would be permissible to the ARDs/ARMS against supply of rice to the RECP at the following scales:

a) Basmati rice	25%
b) IRRI-6/KS-282	25%

- 12(a) Bonus rice would move by Rail provided it is decided by the Government otherwise.

13. The permissible limit of brokens in case of Basmati as well as IRRI-6 and KS-282 would not exceed 33% in any case.

Rice Husking Chakkies/Machines

14. Rice Husking Chakkies/Machines situated in urban and rural areas whose owners were not authorized rice millers for the scheme year 1984 - 85 shall be made in-operative in accordance with the procedure laid down separately.

Movement of Paddy/Rice

15. Movement of paddy within the Scheduled Area would be free except that its movement towards Rahim Yar Khan, Dera Ghazi Khan and Rajanpur from other Districts of the Scheduled Area would not be permissible.
16. Movement of paddy from the Scheduled to the Non-Scheduled Areas and also within the Non-scheduled Area would be completely banned.
17. Boiled paddy will be treated as par with rice in case of movement.
18. There shall be a complete ban on movement of all varieties of rice and its brokens within the Scheduled Area, from the Scheduled to Non-Scheduled Area and also within the Non-Scheduled Area.
19. Transport or carriage of rice or its brokens not exceeding 20 kg by a bonafide consumer would be permissible.
20. Movement of rice by NLC trucks on account of the Rice Export Corporation of Pakistan would be allowed under permit.
21. Paddy/rice being/having been unauthorizedly moved/transported anywhere shall be liable to be forfeited along with the vehicles, vessel or animal by which the same was being transported.
22. The Director Food may issue permits for allowing movement of paddy and rice in relaxation of the ban/restrictions.

Anti-smuggling Measures

23. Anti-smuggling measures would be tightened further to ensure strict implementation of the restrictions on the movement of paddy and rice.

Supervisory Committees

24. District Supervisory Committees consisting of the following have been constituted for every District, in the Scheduled Area:
- a) Chairman Zila Council
 - b) Two (2) Members of Zila Council who happen to be rice growers and can spare time for this assignment.
 - c) A representative of RECP Karachi.
 - d) A representative of Food Department.
25. The Supervisory Committees would supervise the procurement operations of rice in general, and would particularly ensure:
- i) that support price for paddy as fixed by the Government is paid promptly to the growers by dealers;
 - ii) the growers are not exploited in any way;
 - iii) the quality of rice procured is in accordance with the prescribed specifications/standard;
 - iv) Procurement operations in the District is free from mal-practices.

Inspection/Super-inspection

26. The procedure of inspection, sampling and analysis at purchase centers, super-inspection after purchase within the Province and at Karachi the working of Appellate Laboratory and Appellate Board as it operated last year, would continue to operate during the scheme year 1985 - 86.
27. The Appellate Board would meet on pre-determined and fixed days of the week, so that no separate notice of its meeting is required.
28. The Super-inspection Teams would be placed at the disposal of Director Food Punjab who would depute them for necessary surprise checks/super inspection.

29. The super inspection at Karachi shall have no effect on the dealers whose responsibility shall terminate at the dispatching end. The result of the super-inspection at Karachi shall, however, affect the prospects of the staff of Rice Export Corporation of Pakistan and of the Punjab Food Department concerned with the purchase as these shall include monetary recovery from the officials concerned. The procedure of super-inspection at Karachi will be the same as before.

Authorized Rice Dealers/Millers

30. The authorized rice dealers/millers would be appointed after proper screening.
31. In case of Districts of Gujranwala, Sheikhpura and Sialkot the qualifying limit for authorized rice dealers would be supply at least five (5) wagons of rice during 1984 - 85 and for the rest of the Districts it shall be the supply of two (2) wagons.
32. Authorized rice millers who husked paddy to produce at least 20 wagon load of rice which was offered to RECP for procurement during 1984 - 85 would be considered for appointment during the scheme year 1985 - 86.
33. New units and those persons who want to enter the business afresh would be exempted from these restrictions, subject to the verification by the District Food Controllers concerned.
34. In genuine cases, the conditions in para 31 - 32 may be relaxed by Director Food Punjab or any officer authorized by him.
35. Attachment of authorized rice dealers with Railway station situated within the major urban centers would be avoided as far as possible.
36. Electricity meters of all rice mills shall be got checked and scaled through Ilaqa Magistrats/District Food Controllers. The electricity consumed would help in determining the quantity of rice produced which, in turn, would render the accountability of rice mills easier.

37. Comprehensive lists of rice shellers shall be prepared by the DFCs and made a part of the policy document, performance of each one of the mills would be watched closely and objectively during the purchase season. Copies of the lists with the observations of the DFCs regarding their performance would be furnished to the Regional Offices and the Food Directorate for record by 31st May 1986.

Payment and Accounting Procedure

38. Full payment of the price of rice supplied to Government will be made immediately through the nominated Commercial Banks, at the purchase center, subject to quality deduction based on spot analysis.
39. If a seller delivers a consignment under protest declaring his intention to go in appeal against the result of the spot analysis of rice samples on 95% of the total price assured in accordance with the analysis result would be paid, subject to final adjudication by the Director Food, in appeal.
40. The accounting procedure for direct financing of purchase of rice shall be the same as was in the year 1984 - 85.

Miscellaneous

41. Rice would be packed 95 kg per bags net or 96.06 kg gross.
42. Rice stocks which are not purchased for one reason or the other by Rice Export Corporation of Pakistan shall be sold to the Government/ Semi-Government organizations like Canteen Stores/Utility Stores Corporations of Pakistan at the notified prices, under the arrangements made or instructions issued by the Food Department.
43. The export of rice would continue to be made exclusively by the Rice Export Corporation of Pakistan Limited Karachi.

Annexure-I

List of District in the Scheduled Area

- | | |
|----------------|------------------|
| 1. Lahore | 12. T.T. Singh |
| 2. Kasur | 13. Multan |
| 3. Sheikhpura | 14. Sahiwal |
| 4. Okara | 15. Vehari |
| 5. Gujranwala | 16. D.G. Khan |
| 6. Sialkot | 17. Rajanpur |
| 7. Gujrat | 18. Layyah |
| 8. Sargodha | 19. Muzaffargarh |
| 9. Khushab | 20. Bahawalpur |
| 10. Faisalabad | 21. R.Y. Khan |
| 11. Jhang | 22. Behawalnager |

List of District in the Non-Scheduled Area

- | | |
|---------------|-------------|
| 1. Attock | 4. Jhelum |
| 2. Rawalpindi | 5. Mianwali |
| 3. Islamabad | 6. Bhakkar |

Annexure-II

Targets for Procurement of Rice during the Scheme Year 1985 - 86

(Fig. in M.tons)

Region	District	White Basmati	Sela Basmati	Total	IRRI-6/ KS-282	Total
1	2	3	4	5	6	7
LAHORE	Lahore	4500	-	4500	2000	6500
	Kasur	8500	6500	15000	12500	27500
	Sheikhupura	98000	-	98000	22000	120000
	Okara	3000	4000	7000	24000	31000
GUJRAWALA	Gujranwala	92000	-	92000	50000	142000
	Sialket	80000	-	80000	4000	84000
	Gujrat	3500	-	3500	3000	6500
SARGODHA	Sargodha	1000	500	1500	4000	5500
	Khushab	-	-	-	7500	7500
FAISALABAD	Faisalabad	2500	1000	3500	2500	6000
	Jhang	5000	1000	6000	3000	9000
	T.T. Singh	1000	-	1000	500	1500
MULTAN	Multan	-	-	-	-	-
	Sahiwal	1000	6000	7000	7500	14500
	Vahari	-	2000	2000	-	2000
D.G. KHAN	D.G. Khan	-	-	-	2000	2000
	Rajanpur	-	-	-	-	-
	Layyah	-	-	-	-	-
	Muzaffargarh	-	-	-	2500	2500
BAHAWALPUR	Bahawalpur	-	-	-	1000	1000
	R.Y. Khan	-	-	-	-	-
	Bahawalnagar	-	4000	4000	2000	6000
TOTAL:		300000	25000	325000	150000	475000
R.E.C.P (PNP)		-	25000	25000	-	25000
GRAND TOTAL:		300000	50000	350000	150000	500000

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