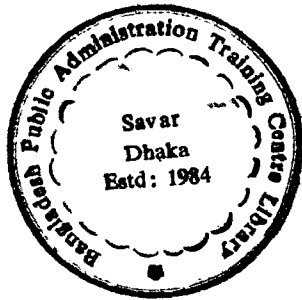


REPORT
OF THE
FOOD AND AGRICULTURE COMMISSION
(APPENDICES)



15 AUG 2006

GOVERNMENT OF PAKISTAN
MINISTRY OF FOOD AND AGRICULTURE
November, 1960.

FUMIGATED

DATE

28-7-73

C O N T E N T S

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APPENDIX
STATISTICAL TABLES

Table 3.I

ANNUAL RATE OF POPULATION INCREASE
IN SELECTED COUNTRIES 1957)

	%
1. Pakistan	1.8
2. India	1.3
3. Ceylon	2.5
4. Turkey	2.8
5. Burma	1.0
6. Philippines	1.9
7. Japan	1.2
8. U.S.	1.8
9. U.K.	0.4
10. Sweden	0.7

Source:- U.N. Demographic Yearbook 1958

Table 3.2

ANNUAL ESTIMATE OF POPULATION OF
PAKISTAN

(Millions)

	East Pak.	Incr- ase	Annual %Incr- ease	West Pak.	Incr- ase	Annual %Incr- ease	All Pak.	Incr- ase	Annual %Incr- ease
--	--------------	--------------	--------------------------	--------------	--------------	--------------------------	-------------	--------------	--------------------------

48	41.20	-		32.40	-		73.60	-	
49	41.50	0.30	0.72	32.75	0.49	1.1	74.25	0.79	.90
50	41.80	0.26	0.72	33.24	0.54	1.5	75.04	0.80	1.06
,1951 (as ited	42.06	-	0.62	33.78	-	1.7	75.84	-	1.08
-do-(as corrected for 5% urban under-enumeration)	42.15	-	0.20	34.08	-	0.90	76.23	-	.50
Mid 1951	42.67	1.35	1.2	34.29	0.61	0.60	76.96	1.96	.90
Mid 1952	44.02	0.63	3.2	34.90	0.57	1.8	78.92	1.20	2.5
Mid 1953	44.65	0.64	1.4	35.47	0.57	1.6	80.12	1.21	1.5
Mid 1954	45.29	0.51	1.4	36.04	0.62	1.6	81.33	1.13	1.5
Mid 1955	45.80	0.58	1.1	36.66	0.67	1.7	82.46	1.15	1.4
Mid 1956	46.38	0.54	1.3	37.23	0.58	1.6	83.61	1.12	1.4
Mid 1957	46.92	0.75	1.2	37.81	0.60	1.5	84.73	1.35	1.3
Mid 1958	47.67	0.77	1.6	38.41	0.63	1.6	86.08	1.40	1.6
Mid 1959	48.44	0.80	1.6	39.04	0.64	1.6	87.48	1.44	1.6
Mid 1960	49.24	0.82	1.7	39.68	0.67	1.6	88.92	1.49	1.6
Mid 1961	50.06	0.86	1.6	40.35	0.69	1.7	90.41	1.55	1.7
Mid 1962	50.92	0.89	1.7	41.04	0.72	1.7	91.96	1.61	1.8
Mid 1963	51.81	0.91	1.7	41.76	0.74	1.7	93.57	1.65	1.7
Mid 1964	52.72	0.95	1.9	42.50	0.77	1.8	95.22	1.72	1.8
Mid 1965	53.67	1.8	1.8	43.27		1.8	96.94		1.8

Source:- Planning Commission,
Government of Pakistan.

TABLE 3.3

PER CAPITA FOOD CONSUMPTION IN SELECTED COUNTRIES

IN CALORIES PER DAY)

Name of countries	Period	Cereals	Pota- toes & other starchy roots.	Sugar & Syrup	Pulses & nuts	Fruit & Vege table	Meat	Egg	Fish	Milk	Fats & Oils	Total
Pakistan	1951-53	1490	...	137	79	63	24	2	3	125	89	2010
	1954-56	1468	...	148	84	63	24	2	5	125	85	2000
	1956-57	1617	...	148	84	63	24	2	5	125	86	2150
India	1951-53	1178	27	118	206	30	5	1	3	103	75	1750
	1954-56	1261	29	141	236	29	6	1	3	95	86	1890
	1956-57	1313	28	144	246	29	6	1	4	91	91	1850
Ceylon	1952-53	1163	96	171	329	30	13	6	35	27	95	1970
	1954-56	1216	94	169	343	30	13	5	33	34	90	2030
	1956	1160	79	190	344	33	12	4	30	31	79	1960
Turkey	Prewar	1855	11	79	106	91	73	8	3	73	148	2450
	1948-50	1823	31	108	100	129	69	5	3	76	143	2490
	1951-53	1861	56	123	116	135	75	6	6	76	167	2620
	1954-56	1894	61	129	125	168	66	6	6	71	134	2660
	1956-57	1900	62	138	124	168	67	6	5	74	126	2670
Philippines	1952-53	1293	137	149	67	111	60	10	29	12	73	1940
	1954-55	1281	135	187	42	93	62	10	28	18	80	1940
Japan	Prewar	1480	124	150	148	71	9	10	30	5	23	2050
	1948-50	1436	173	48	67	59	8	3	48	7	21	1870
	1951-53	1381	147	108	119	67	10	11	61	12	44	1960
	1954-56	1386	157	133	142	73	13	14	63	20	64	2070
	1956	1391	162	138	137	82	14	14	63	23	74	2100
United States	Prewar	899	130	506	80	177	459	64	22	370	500	3210
	1948-50	764	103	494	82	196	528	86	21	426	483	3180
	1951-53	732	97	490	81	190	541	87	21	429	480	3150
	1954-56	689	95	489	75	187	574	84	20	434	502	3150
	1957	667	98	485	78	181	569	81	19	434	492	3100
United Kingdom	Prewar	925	158	471	45	119	504	51	35	275	515	3110
	1948-50	986	218	394	69	109	359	52	33	358	502	3080
	1951-53	927	200	451	57	108	420	48	27	352	507	3100
	1954-56	862	189	523	67	121	519	53	28	346	537	3250
	1957-58	847	185	548	66	122	546	55	29	348	548	3290
Sweden	Prewar	907	234	477	34	73	327	33	70	528	430	3120
	1948-50	838	230	495	39	91	335	40	58	531	488	3140
	1951-53	789	212	459	30	95	347	40	69	485	489	3020
	1954-56	735	195	465	36	112	335	41	70	508	511	3030
	1957-58	702	192	451	35	102	372	41	68	496	492	2950

SOURCE:

Compiled by Central Statistical Office, (From a publication of FAO

TABLE 3.4

PER CAPITA INCOME OF SELECTED COUNTRIES
AT CURRENT PRICES 1953 TO 1957

	(in Rupees)				
	1953-54	1954-55	1955-56	1956-57	1957-58
1. Pakistan (4)	243	245	237	250	249
2. India	195	182	182	295	289
3. Ceylon	364	371	407	543	552
4. Turkey	761	745	893	1452	1829
5. Burma (3)	146	139	146	229	229
6. Philippines	553	553	576	890	924
7. Japan	599	625	672	1076	1205
8. U.S.A.	6310	6118	6575	9824	10048
9. U.K.	2482	2647	2786	4324	4562
10. Sweden	3875	3435	3656	5633	6033

(1) Fiscal year beginning first April

(2) At factor cost 1949-52

(3) Fiscal year beginning (30th September)

(4) Pakistan's estimates are only available in constant prices.

Note:- 1. The estimates of per capita Income are based on National Income data derived from the U.N. Year-book of National Accounts Statistics 1958, and population figures taken from the U.N. Demographic Year-book 1958. Per capita Income of each country has been converted into Pak Currency by first converting their currency into U.S. dollar at the par value as agreed to with I.M.F. and then from U.S. dollar to Pak Currency. The difference therein may be due to conversion at two stages.

2. Abrupt rise in the per capita Income for other countries for the year 1955-56 onwards is due to devaluation of Pak Currency in July, 1955.

TABLE 3.56

NATIONAL INCOME OF PAKISTAN AT CONSTANT PRICES

(By Industrial Origin)

(1949-50 to 1959-60)

(Price: Average of 1949-50 to 1952-53)

(In Million of Rupees)

SECTOR	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
Agricultural:-	10,462	10,824	10,495	10,945	11,663	11,633	11,225	12,122	11,954	11,735	12,477
Major Agricultural Crops	6,326	6,584	6,122	6,379	6,951	6,782	6,377	7,274	7,106	6,887	7,629
Minor Agricultural Crops	1,154	1,154	1,160	1,274	1,425	1,425	1,425	1,425	1,425	1,425	1,425
Livestock	2,273	2,323	2,369	2,415	2,415	2,415	2,415	2,415	2,415	2,415	2,415
Fisheries	676	730	811	844	839	975	975	975	975	975	975
Forestry	33	33	33	33	33	33	33	33	33	33	33
Mining.	23	26	30	34	36	39	43	46	51	52	61
Manufacturing:-	1,191	1,279	1,374	1,500	1,750	1,923	2,189	2,347	2,438	2,545	2,823
Large scale	250	313	391	500	734	890	1,142	1,286	1,362	1,451	1,711
Small scale	941	966	983	1,000	1,016	1,033	1,047	1,061	1,076	1,094	1,112
Government	808	858	1,048	1,032	1,052	1,049	1,130	1,164	1,318	1,463	1,377
Banking & Insurance	43	51	58	68	69	71	75	79	100	104	114
Transport & Communication	442	504	513	529	536	546	565	583	609	643	667
Services (1)	1,473	1,543	1,576	1,608	1,639	1,672	1,705	1,727	1,749	1,784	1,821
Rental Income	1,005	1,036	1,053	1,072	1,089	1,108	1,109	1,124	1,139	1,159	1,178
Whole-Sale & Retail Trade	1,607	1,669	1,637	1,717	1,751	1,781	1,851	1,987	1,987	1,971	2,112
Indirect Taxes on Exports	182	356	286	292	288	235	287	220	178	182	180
Factor Income Payments	-10	-9	-8	-14	...	-9	-26	-12	-8	-10	-19
Effects of Terms of Trade	12	187	99	-306	-526	-278	-637	-612	-528	-701	-894
TOTAL NATIONAL INCOME	17,238	18,324	18,161	18,482	19,447	19,857	19,516	20,785	20,987	20,917	21,897
ESTIMATED POPULATION IN(000)	74,250	75,040	76,959	78,886	80,039	81,186	82,240	83,280	84,450	85,635	86,822
Per Capita income in rupees	232	244	236	234	243	245	237	250	249	244	252

NOTE:- Estimates are provisional and are based on fiscal year April to March. Income from Minor Crops, Livestock, Fisheries and Forestry has been repeated from previous years in 1955-56, 1957-58, 1958-59 and 1959-60.

(1) Includes construction.

(2) Population figures are those estimated by the Ministry of Interior.

SOURCE:- Central Statistical Office.

Table 3.6

FOREIGN EXCHANGE EARNINGS DURING FIRST PLAN PERIOD

(Million Rupees)

	1954-55 (a)	1955-56 (a)	1956-57	1957-58	1958-59	1959-60 (b)	Total 1955-60
Raw jute	857	941	808	858	790	818	4215
Jute manufactures	16	85	102	133	145	220	685
Raw cotton	496	510	362	246	223	168	1509
Cotton manufactures		32	95	34	68	200	429
Hides and skins	45	49	51	50	61	40	251
Wool	80	85	96	78	81	77	417
Tea	70	31	48	20	16	40	155
Miscellaneous exports	188	203	138	109	145	200	795
Invisible receipts	166	195	209	198	289 (c)	207	1202
Total :-	1,918	2,131	1,909	1,726	1,818	1,970	9,554

(a) Adjusted for revaluation of the Pakistan rupee in 1955 to make the figures for various years comparable.

(b) Estimated by the Planning Commission.

(c) Including surrenders of foreign exchange under Martial Law Regulation.

Source: State Bank of Pakistan

Table 3.7

FOREIGN EXCHANGE GAP DURING THE FIRST FIVE YEAR PLAN

(Million Rupees)

Foreign exchange earnings	10,600
Non-development foreign exchange expenditure ..	12,100 (a)
Imports of foodgrains under P.L.480	1,000
Balance on non-development current account ...	2,500
Extraordinary imports of other agricultural commodities under P.L.480 ...	700 (b)
Development imports	6,500
Foreign exchange gap	9,700

(a) Including a lump sum provision of Rs.500 million for debt service in respect of new loans likely to be contracted during the Plan period.

(b) This is required to finance a part of the rupee expenditure on the Indus Basin replacement works.

Source:- State Bank of Pakistan

Table 3.9

SECOND PLAN PROJECTIONS OF FOREIGN EXCHANGE EARNINGS

(Million Rupees)

Annual average First- Plan	1959-60 (Estimated)	Annual average Second Plan	Total Second Plan
			4,000
			1,335
			1,900
			210
			400
			245
			1,440
			1,070
			<u>10,600</u>

Source: THE SECOND FIVE YEAR PLAN, (1960-65).

Table 3.9

PERCENTAGE RATIO OF PAKISTAN FOREIGN
EXCHANGE EARNING TO THE NATIONAL INCOME

Y E A R	Amount in Millions of Rupees				
	National Income		Foreign exchange earnings		(B) as a percentage of (a)
	(a)		(B)		
1958 - 59	20,917		1,705		8.15
1959 - 60	21,897		2,044		9.33

NOTE: Figures of Foreign exchange earning for 1958-59 have been taken from the Economic Survey 1958-59, issued with the 1958-59 Budget of the Central Government and those for the year 1959-60 from the White Paper, 1959-60 of that years Central Budget.

Source:- Food & Agriculture Commission.

Table 4.1

Land Use Statistics of Sub-Montane Region of West Pakistan (000 acres)

	Area (000 acres)	Percentage of each class.	Percentage of total area.
2			
1. <u>Crop land.</u>			
(a) Canal irrigated (Nehri).	1270.4	17.6	8.1
(b) Seasonally flooded (Sailab) i.e., depending on river floods.	206.8	2.9	1.3
(c) Torrent watered (Sailaba)	872.5	12.0	5.6
(d) Well irrigated (Chahi)	587.5	8.1	3.8
(e) Dry cropped (Barani)	4283.7	59.4	27.3
Total:-	<u>7220.9</u>	<u>100.0</u>	<u>47.1</u>
2. <u>Waste lands (generally used for grazing)</u>			
(a) Culturable	2433.1	32.9	15.5
(b) Unculturable	4953.2	67.1	31.6
Total:-	<u>7386.3</u>	<u>100.0</u>	<u>47.2</u>
3. Forests	746.9		4.8
4. Settlements and associated non-agricultural lands 50.5 (includes urban areas and such associated non-agricultural lands as airports, military cantonments, villages, roads etc.			0.3
5. Water	252.0		1.6
6. Swamp	0.7		
Grand Total	<u>15,657.3</u>		<u>100.0</u>

1. Report on a Reconnaissance Survey of the Landforms, Soils and Present Land Use of Indus Plains, West Pakistan by the Photographic Survey Corporation of Canada and Central Soil Conservation Organization, Pakistan, February, 1958.

2. Revenue Record.

TABLE 4.2

MEAN RAINFALL OF SOME REPRESENTATIVE STATIONS

(Mean of 60 years from 1881

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
--in inches--													
Murree	3.79	4.31	4.81	4.13	2.62	3.98	12.40	13.61	5.42	1.56	0.73	1.80	39.36
Rawalpindi	2.49	2.48	2.67	1.92	1.25	2.31	2.07	9.17	3.89	0.63	0.28	1.24	36.37
Peshawar	1.44	1.53	2.44	1.76	0.77	0.31	1.26	2.03	0.81	0.23	0.31	0.67	13.50
Lahore	1.04	0.97	0.79	0.57	0.59	1.64	5.45	5.15	2.20	0.24	0.46	0.47	19.21
Lyallpur	0.40	0.57	0.56	0.47	0.43	1.22	2.86	3.58	1.49	0.12	0.11	0.25	12.06
Khushab	0.69	0.92	1.04	0.91	0.76	1.41	3.90	3.51	1.38	0.15	0.08	0.43	15.18
Fort Sandeman	0.72	1.08	1.38	0.94	0.91	0.64	2.14	1.90	0.32	0.10	0.13	0.57	10.83
Quetta	1.94	1.98	1.74	0.98	0.39	0.17	0.46	0.33	0.04	0.12	0.28	0.01	9.44
Panjgur	0.23	0.96	0.60	0.39	0.11	0.12	0.79	0.34	0.04	0.01	0.05	0.57	4.81
Dalbandine	0.88	0.96	0.40	0.30	0.07	0.01	0.12	0.13		0.02	0.06	0.68	3.63
Kalat	1.31	1.39	1.05	0.56	0.20	0.19	0.60	0.33	0.09	0.09	0.23	0.94	6.98
Sukkur	0.18	0.28	0.24	0.10	0.14	1.14	1.14	1.12	0.02	0.01		0.03	3.90
Hyderabad (Sind)	0.17	0.24	0.20	0.07	0.19	0.39	2.98	2.30	0.63	0.03	0.06	0.40	7.61

SOURCE: Department of Meteorology and Geophysics,
Government of Pakistan, Karachi.

TABLE 4.2 (b)
TEMPERATURE °F RECORDED AT SOME REPRESENTATIVE STATIONS IN WEST PAKISTAN

(Mean of 60 years from 1881 to 1940)

Station		Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Annual
Murree	Mean maximum °F	56.0	58.1	67.5	76.7	85.4	90.2	85.8	79.3	77.2	74.3	67.2	59.9	90.6
	Mean minimum °F	24.9	23.3	30.8	38.0	45.6	51.0	54.0	54.1	48.3	43.6	37.3	27.7	22.6
	Humidity percent	62	64	55	50	42	53	78	88	69	49	43	50	57
Rawalpindi	Mean maximum °F	70.6	75.2	86.5	97.5	108.3	113.0	109.3	100.0	99.1	95.1	85.0	74.9	113.4
	Mean minimum °F	30.8	33.9	40.7	49.4	58.5	66.8	68.7	68.1	61.2	48.2	36.1	31.0	29.9
	Humidity percent	83	81	63	51	35	38	67	75	62	58	67	77	63
Peshawar	Mean maximum °F	71.1	76.0	86.8	97.3	109.9	115.3	113.1	107.0	102.2	95.9	84.9	75.1	115.9
	Mean minimum °F	32.1	36.7	41.3	50.8	60.1	69.1	72.4	71.5	62.9	50.4	38.1	32.5	30.7
	Humidity percent	72	79	72	59	39	39	60	70	64	57	58	67	61
Lahore	Mean maximum °F	74.2	80.5	94.0	105.2	113.5	115.2	110.3	104.0	102.3	98.8	89.0	78.3	115.8
	Mean minimum °F	34.7	37.4	45.6	55.6	64.5	71.7	73.2	73.3	67.1	53.1	41.7	35.6	33.5
	Humidity percent	85	78	62	47	39	50	71	76	70	61	68	86	66
Lyallpur	Mean maximum °F	74.1	80.2	92.3	104.0	111.9	114.2	111.0	104.9	104.8	99.9	89.6	78.6	114.9
	Mean minimum °F	32.8	36.7	41.0	54.8	63.6	71.2	73.4	73.1	67.0	53.9	41.9	34.8	32.2
	Humidity percent	78	78	66	49	45	48	65	73	68	61	67	76	64
Khushab	Mean Maximum °F	75.5	80.9	92.4	103.9	113.6	116.0	112.2	106.2	104.6	100.5	90.0	80.3	116.9
	Mean minimum °F	33.4	37.0	45.4	56.3	64.7	70.9	71.7	72.2	67.2	54.2	40.7	33.7	31.7
	Humidity percent	67	68	59	46	37	46	68	73	68	57	56	62	59
Fort Sandeman	Mean maximum °F	67.1	71.9	81.6	91.1	100.7	106.2	106.8	103.5	99.2	90.9	79.9	71.3	107.6
	Mean minimum °F	23.2	25.3	33.7	44.8	54.2	63.6	66.7	66.3	57.1	43.7	33.0	24.7	21.7
	Humidity percent	79	78	69	64	55	55	61	57	53	52	58	75	63
Quetta	Mean maximum °F	65.6	67.4	75.9	84.2	92.2	97.7	96.0	97.1	92.3	84.1	72.1	67.0	99.7
	Mean minimum °F	16.7	20.4	26.8	35.0	42.7	49.3	56.0	52.0	39.6	30.1	23.4	18.6	14.0
	Humidity percent	79	78	69	64	55	55	61	57	53	52	58	75	63
Panjgur	Mean maximum °F	73.6	79.8	86.6	96.9	106.6	109.9	109.7	106.8	102.6	95.9	85.7	76.6	110.9
	Mean minimum °F	28.7	31.2	37.7	49.4	59.7	66.3	69.2	66.0	54.8	46.4	37.3	29.7	25.8
	Humidity percent	75	74	66	64	55	52	55	63	54	48	51	65	61
Dalbandine	Mean maximum °F	74.3	80.9	90.1	99.5	109.2	113.8	114.4	110.2	106.7	98.4	87.1	77.7	115.4
	Mean minimum °F	23.1	26.5	34.1	45.3	55.2	62.9	67.3	62.1	51.6	39.5	30.0	24.4	20.3
	Humidity percent	74	69	55	46	33	29	33	35	35	40	50	71	47
Kalat	Mean maximum °F	66.1	66.2	74.5	82.6	92.3	97.1	98.2	96.1	93.6	82.2	73.4	67.4	98.9
	Mean minimum °F	14.8	13.0	20.0	27.9	36.3	43.0	49.3	45.8	33.6	24.3	17.6	13.3	6.9
	Humidity percent	71	71	61	57	45	41	47	47	45	48	51	66	54
Sukkur	Mean maximum °F	80.2	92.9	104.5	107.6	115.9	115.5	111.3	106.3	105.1	102.2	94.2	84.9	116.5
	Mean minimum °F	36.5	40.4	47.8	59.9	70.7	77.3	76.4	76.4	72.5	62.2	49.8	40.8	35.9
	Humidity percent	62	61	57	54	56	69	77	77	77	65	63	67	65
Hyderabad	Mean maximum °F	84.6	92.0	102.9	110.1	115.5	113.2	107.7	102.4	105.0	104.4	97.1	87.1	116.2
	Mean minimum °F	41.6	44.5	53.1	63.6	71.8	75.6	76.2	75.2	72.3	62.1	52.5	44.9	40.3
	Humidity percent	61	62	58	57	62	68	72	76	75	61	55	55	55

SOURCE: Department of Meteorology and Geophysics,
Government of Pakistan, Karachi.

TABLE 4.3 (a)
SUB-MONTANE REGION OF WEST PAKISTAN
AREA OF Kharif Crops - 1958-59
 ('000. ACRES)

	Rice	Maize	Jawar	Bajra	Pulses	Groundnut	Sesamum (Til)	Cotton	Sanhamp	Sugar cane	Vegetable	Fruits	Potato	Fodder	Misc.	Total
Canal irrigated	58.3	218.7	12.8	5.5	5.7	0.4	0.1	22.8	0.5	176.7	4.0	5.5	-	27.5	7.2	545.7
Well irrigated	72.8	82.8	6.9	14.8	0.5	-	0.1	13.1	0.2	36.4	4.2	2.3	10.2	2.9	2.2	249.4
Torrent watered	-	3.1	13.6	18.4	-	-	-	0.8	-	1.1	-	0.5	-	0.5	-	38.0
Seasonally flooded	25.5	6.3	7.6	10.0	2.7	-	3.7	2.8	0.5	11.0	-	0.1	-	5.2	0.4	75.8
Rainfed	123.6	83.6	177.5	666.1	147.4	4.9	2.8	12.6	5.2	19.3	0.6	5.4	-	103.4	6.5	1358.9
Rainfed gully floors (Las)	-	0.4	2.9	1.0	2.9	-	-	-	-	-	-	-	-	0.6	-	7.8
T O T A L :-	280.2	394.9	221.3	715.8	159.2	5.3	6.7	52.1	6.4	244.5	8.8	13.8	10.2	140.1	16.3	2275.6

SOURCE :- Revenue Record.

TABLE A.3 (b)
SUB-SAHYAN REGION OF WEST PAKISTAN
Area of Rabi Crops - 1958-59
(000' acres)

System of cultivation	Wheat	Barley	Gram	Wheat gram mixture	Pulses	Oil seeds	Vegetables	Fruits	Potato	Fodder	Poppy	Tobacco	Misc.	Total
Canal irrigated	331.9	45.0	28.2	0.2	5.8	7.5	7.2	9.8	-	115.4	1.2	5.3	0.7	564.4
Well irrigated	179.7	14.3	2.6	0.2	1.0	3.3	12.6	10.8	2.3	104.2	0.8	22.8	1.6	419.0
Torrent watered	92.1	8.7	55.7	-	0.5	17.5	0.3	5.2	-	2.3	-	-	-	132.4
Seasonally flooded	162.4	10.8	6.0	0.2	9.0	4.9	0.6	2.1	-	7.8	-	0.2	0.3	204.7
Rainfed	2161.0	134.6	582.1	65.8	93.7	164.7	1.2	10.1	0.5	30.2	-	0.2	7.0	3251.4
Rainfed gully floors (Las)	7.7	0.1	0.2	-	0.2	0.3	-	-	-	-	-	-	-	8.6*
T O T A L :-	2934.9	213.6	616.7	66.5	110.2	198.2	21.9	38.1	2.9	259.9	2.1	28.5	9.7	4580.5

*These data are only those of two Tehsils of Rawalpindi.

SOURCE: Revenue Record.

TABLE 1.3 (c)

AREA AND PRODUCTION OF PRINCIPAL CROPS OF SUB-MONTANE-
REGION IN RELATION TO TOTAL AREA AND PRODUCTION OF WEST
PAKISTAN

(In thousands)

1957-58
1958-59

Crops	For the Region		For West Pakistan		Percentage of	
	Area(acres)	Production Tons	Area(acres)	Production (Tons)	Area (acres)	Produc- tion(tons)
Wheat	2934.9	1282.9	12069.8	3760.5	24.2	34.1
Barley	213.6	49.4	565.5	126.0	37.7	39.2
Gram	616.7	136.0	2996.9	562.0	20.6	24.1
Rice	280.2	91.6	2819.7	969.9	9.9	9.4
Maize	394.9	217.2	1134.0	464.9	34.8	46.7
Jowar	221.3	31.0	1095.8	211.1	21.0	14.7
Bajra	715.8	91.3	1782.3	302.5	40.2	30.2
Pulses	269.4	28.2	1051.0	167.8	25.6	16.8
Oil seeds	210.2	26.2	1438.6	239.4	14.6	10.9
Sugarcane (canes)	244.5	3014.1	1050.7	11583.8	23.3	26.0
Potato	13.1	940.7 (000' maunds)	31.0	2685.4 (000' maunds)	42.2	35.0
Tobacco	43.4	89.0 (million lb)	87.0	124.9 (million Lb)	49.4	71.3

Source: (1) Land and Crop Statistics of Pakistan, FACT Series III, March, 1959, Ministry of Food & Agriculture, Government of Pakistan, Karachi.

(2) Revenue Records.

N.B. The figures for production are estimates compiled by the Ministry of Food and Agriculture. There are apparent anomalies such as the relatively high percentage of national production from this area. Wheat and tobacco can be cited as examples. However it must be stated that the average production in the irrigated areas in Peshawar Shahrpur and Sialkot Districts are higher than the national average for this class of land.

TABLE 4.4

NORMAL YIELDS OF PRINCIPAL CROPS

(In maunds)

District or Tehsil	Wheat	Barley	Gram	Rice	Maize	Jawar	Bajra	Sugar cane (gur)	Pota- to	To- bacco
Hazara district	6.4	7.1	4.1	15.4	5.4	5.5	4.3	-	23.3	-
Peshawar district	10.5	12.5	5.0	17.5	16.0	-	-	32.0	-	22.5
Attock district	7.2	9.7	6.7	-	13.2	-	7.1	7.6	-	27.7
Bannu district	6.0	7.5	7.5	12.0	12.0	6.0	6.5	-	-	-
D.I.Khan District	7.5	5.0	5.2	-	10.8	4.0	4.0	24.7	-	-
Mianwali Tehsil	7.9	7.9	6.4	-	-	5.3	6.3	-	-	-
Isakhel Tehsil	6.6	5.6	5.6	-	-	4.6	5.6	-	-	-
Rawalpindi Tehsil	5.0	6.0	6.0	18.0	-	-	4.0	-	-	-
Gujar Khan Tehsil	5.0	6.0	6.5	12.5	-	4.0	4.0	-	-	-
Jhelum Tehsil	8.5	9.5	7.0	-	8.5	7.0	7.5	-	-	-
Gujrat Tehsil	7.0	6.5	6.0	15.0	12.0	6.0	7.0	-	-	7.5
Shahpur District	10.5	9.0	8.2	12.5	9.4	5.2	6.0	20.0	-	-
Kharian Tehsil	6.0	-	7.0	12.0	10.0	5.0	6.0	-	-	8.0
Sialkot District	11.0	-	8.5	15.0	-	-	6.0	-	100.0	10.0

SOURCE: Revenue record.

Table 4.5AVE AGE SIZE OF HOLDING (ACRES)

<u>District</u>	<u>Area</u>
Attock	2.45
Bannu	2.02
Dera Ismail Kha	2.78
Gujrat	1.32
Jhelum	1.18
Kohat	1.79
Mardan	1.97
Mianwali	3.65
Rawalpindi	0.97
Shahpur	3.82
Sialkot	2.75

Table 4.6LIVESTOCK NUMBERS ENTERING PAKISTAN IN
POWINDAHS' FLOCKS & HERDS (ANNUALLY).

Cattle	1,300
Sheep	2,25,000
Goats	49,000
Donkeys	14,000
Camels	54,000

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APPENDIX II - A

No. F. 19-5/59-F&AC
 GOVERNMENT OF PAKISTAN
 FOOD AND AGRICULTURE COMMISSION

Karachi, dated the 10th Dec 1959.

Dear

The Food & Agriculture Commission has decided to set up a panel on
 In consultation with the Central and Provincial Governments, we are nominating officers to work on this. It has been decided to request you to work on this panel. A copy of tentative outline of enquiry is enclosed, which lists the main subjects on which the panel is requested to give a report. The panel will be free to include any other relevant subject if they feel it necessary. As most of the members of the panel come from the Departments who are dealing with the subjects, it is expected that the necessary information will be made available to the panel through the Department concerned. If any other information is required and which the panel would like to have, this can be collected through the office of the Commission and we may be informed.

For each panel a convenor has been nominated. He is requested to act as rapporteur of the panel and also to arrange the first meeting. The panel will elect its own permanent or temporary Chairman as convenient. Generally speaking, it will be possible for the senior most officer in the panel to preside.

It is intended that at the first meeting, the panel may decide as to what information is to be collected. Afterwards, wherever necessary, the panel may meet separately in the two wings covering that portion of the subject which concerns that wing and appoint a separate convenor for each wing. The Central members in such cases may join the meeting in either wing or may divide themselves up. The final discussions and the report may be prepared by the panel as a whole. The meetings of the panel may be held at any suitable place, but the general meetings of the panel, as far as possible, may be announced in advance and dates intimated to us so that the personnel of the Commission may join.

In addition to the names in the main panel, in some cases a further list is attached. It is suggested that these members may be co-opted for work in each wing to enable collection of available information easily. Where the Heads of Departments have been nominated to the panel, their subordinate officers have only been nominated wherever they have to act as experts on such subjects. It is presumed, however, that the Heads of Departments will co-opt any other member of their Department whose presence will be helpful.

While the panels are mostly from Govt. service, some non-officials have been included to represent the non-official point of view. The panel may, if they desire, suggest names of other non-officials whose presence will be helpful for inclusion in the panel. A list of a few more non-official members and foreign experts is being finalised and will be communicated shortly.

The panels are requested to report not later than the 15th of March 1960, except in the case of panels No. 12, 14 and 15. The reports on panel No. 15 and on Section I of panel No. 14 may please be made available

to the Commission not later than the 15th of January, 1960. It is appreciated that the subject covered by panel No. 12 is very wide and final report would take some time. The Commission is, however, required to make interim recommendations on the question of organisation by the end of January 1960 and the panel is requested to submit an interim report, especially on the matter of utility of statutory bodies for agricultural development and the organisation necessary at the Central Ministry, not later than the 15th of January, 1960.

Yours sincerely,

Sd/- M. A. Cheema

SECRETARY-GENERAL

To

GENERAL DIRECTIONS TO ALL PANELS

1. The central problem is considered to be:-

How to develop a well-staffed, well trained, devoted and effective organisation to reach and activate the cultivator.

2. The panel should make a thorough study of the present methods to determine the principal reasons for slow progress.
3. In the light of the above review, the panel should determine any changes needed in the orientation of effort, with particular regard to effective incentives.
4. The panel should remember the limitations of finance in making any recommendations.
5. The panel may set up such sub-committees, or coopt such members, as it thinks necessary. It may collect data itself or ask the Secretariat to collect data for it.
6. The tentative outlines of enquiry drawn up for panels should not be regarded as definitive or conclusive. The panels may well find other items on which to make enquiry or come to decisions, should certainly consider themselves free to do so.
7. As a part of their report, all panels are requested, so far as is feasible, to make an assessment of the requirements of various types of personnel, supplies and materials which will be required to implement their recommendations. They may also attempt an assessment of results which will follow the acceptance of their recommendations.

Panel No. 1Land Consolidation and Land TenureTentative Outline of EnquiryA. Land Consolidation

- Has the cultivator a farm at all, in terms of adequate size to maintain a family?
- Where are the districts where the unit is too small to support a family because of overcrowding?
- Can such units be made viable by change of crop, or better seed, fertiliser, cultivation methods, mechanisation or more irrigation?
- Would excess population move to new development areas?
- Are there any nearby?
- 2. Where are the districts where the unit is small because of fragmentation?
- Is there a consolidation policy?
- Is it being carried out?
- If not, why not?
- Does the consolidated unit provide a higher income and more employment capacity?
- Who plans and executes the consolidation policy?
- In what districts has it been successful?
- 3. Are soil conservation needs considered when planning consolidation?

B. Land Tenure

- 1. Following the new land laws what proportion of the country's cultivators are still tenants, and what peasant proprietors?
- How are these distributed in the country?
- 2. What security has a tenant?
- What are his conditions of tenure?
- Do these operate as a disincentive either to landlord or tenant?
- What service does a landlord contribute?
- How could the landlord/tenant system be better used to improve production?

C. Land Taxation

- 1. What is the incidence and method of land taxation?
- Does it operate to deter production?

D. Allotment of New Land

- 1. What is the system? Is it detrimental to production?
- What changes are needed to enhance production?

Panel No. 2Land Use, Cropping Patterns and Crop Production TechniquesTentative Outline of EnquiryA. Land Use and Cropping Patterns

1. What are the natural factors affecting land use, such as climatic environment? Where are the rain areas, perennial irrigation areas, and flood irrigation areas?
2. What are the soil categories? Are they known?
3. What is the general distribution of crops in the country?
4. Apart from environment, what determines the way land is used?
Is water supply a determining factor?
5. Where are the water logged areas and the saline areas? Where are those liable to waterlogging and salinity in the near future? To what extent does this problem affect land use?
6. Does price affect land use?
Is there competition between food and cash crops for land?
7. Is there knowledge as to the best rotations? Is mixed or balanced farming known to be beneficial? Is mixed or balanced farming practised? Is land overstocked? Are stocks related to the carrying capacity of land?
8. Is conservation needed or practised at farm level?
9. What are the most productive districts?

B. Crop Production Techniques

1. Is cultivation before sowing important? Is weed control important?
Does inadequacy on these two points seriously affect production?
Could improvement in small implements overcome it?
2. What are the advantages and disadvantages of machinery for cultivation and weeding? Could it alter the unit size of holding per family?
Is there scope for using machinery for farming operations? Where?
3. Is water management or mismanagement an important factor in production?
4. Does the quality and variety of seed used affect production? What is the system of seed supply? How could it be improved? Does line sowing affect production? What are the difficulties in encouraging it?
5. Does fertiliser improve production? What is the evidence? Have sufficiently wide trials been made? Is it economically beneficial to the cultivator?
6. Does plant protection improve production? What is the system and where applied? What could be done to improve it? Could the cultivator do it himself? Is it economically beneficial to him?
7. Could commercial channels be relied upon to distribute fertiliser and plant protection material down to farm level?
8. Could methods of harvesting and marketing be improved economically? Is there appreciable wastage?
9. Is farm storage a point of difficulty and wastage?
10. Is the crop-sharing system a serious deterrent to cultivators adopting new practices?
11. Is lack of demonstration at cultivator farm level a reason for slow progress?
12. Is bad distribution of supplies a reason for slow progress?
13. To what extent would tree plantations in agricultural areas be beneficial? Would they reduce the use of manure as fuel? Would they supplement the cultivators' income or reduce his expenses? How would they best be encouraged and managed?

Panel No. 3Irrigation & DrainageTentative Outline of Enquiry

1. What is the potential development of water resources? What is the distribution of perennial and flood canals, storage dams and pumps and their relative areas?
2. Are tube wells and low life wells an important factor for irrigation? Are they economic? Is power available? Where are they or could they be mainly located?
3. What are the objectives of the irrigation system? Are these determined by financial considerations? How are they inter-related with agricultural needs? Where is the decisive control located? Have these objectives any affect on crop patterns? Are they the best objectives from a production point of view?
4. Does the system of charging for water have any deterrent effect on production?
5. What is the location and extent of the salinity, waterlogging and drainage problems? What potential areas may be affected? Have any solutions been found? Have they been implemented? If not, what are the reasons?
6. What is the extent of the affect on production if a solution is not found and implemented? Why is there no drainage system?
7. What is the scope of minor irrigation and drainage works in Eastern Pakistan in increasing production? What is the scope of the coastal embankment repairs there?
8. What is the significance of flood control on production? Can irrigation water be reduced or cut off to prevent excess water on land in the rains?

Panel No. 4Livestock ProductionTentative Outline of Enquiry

1. Why does a cultivator need livestock and what value does he derive from them?
2. Is there competition between animals and crops for land? Does this adversely effect production?
3. Is mechanisation eliminating the need for bullock power, a desirable and feasible way of making more land available for crops?
4. Do animals for the most part simply use open range or is crop and animal husbandry coordinated? Would mixed farming rotation with animals related to land carrying capacity, substantially improve yields, and is it feasible?
5. Is farmyard manure used on crops? If not, how can its use best be encouraged?
6. Is there scope for sheep and poultry to give a balanced mixed farming income.
7. Is there scope for dairy specialisation?
8. What are the problems of animal nutrition and animal health at cultivator level?
9. If mixed farming is to be encouraged, how is the distribution of duties best arranged between the Agricultural and Veterinary Departments?
10. What are the breeding policies and the potential effect of them on production?
11. What is the potential of the development of range lands? Where are they? What are the difficulties?

Panel No. 5Marketing, Processing & CreditTentative Outline of EnquiryA. Marketing

1. What is the system of marketing? Does it involve for the cultivator problems of transport and storage which place him at a disadvantage with the buyer? Has the buyer a monopoly? Who normally is the buyer? Is he a merchant who has already financed the cultivator? What are the pricing practices prevalent in the marketing system? What are the weighing and grading practices? In general, is the system fair from the cultivator's view point? Is there significant wastage in the system?
2. What is the extent and experience of officially established markets in obviating disadvantages and disincentives from the cultivator?

B. Processing

1. Is the processing efficient? Is inefficiency a significant factor in reducing the value of production and so of price at cultivator's level?
2. Are the practices in processing fair to the cultivator? Are the margins taken by processors too high? Does the cultivator share in the byproducts of processing, such as ginning outturn and seed outturn in cotton and sucrose content in sugar?
3. What are the organisations & functions of the processing industry? Is credit a feature of it? What are the differential margins at each point from the actual price paid to the cultivator and that charged to the consumer?
4. Is the processing industry stable or does rapid change of ownership lead to desire for quick profit, absence of capital investment, and lack of incentive to improvement?
5. Do any co-operatives control their own processing plants?

C. Credit

1. What are the kinds and amounts of credit needed by cultivators?
2. Is credit available in time and place to match these needs?
3. Would a system of supplying seed and fertiliser on credit in kind against a return in kind of equivalent value at harvest be workable and stimulating to usage? Should all credit be in kind as far as cultivators are concerned?
4. What are the present sources of credit to the cultivator, and what does it cost him to use them?
5. Is credit loaned for production purposes diverted to unproductive purposes? Is there any system of supervision in action which ensures that credit is used for productive purposes? Is credit needed for unproductive but necessary purposes? Is the Taccavi system financially sound?
6. What are the conditions and security for the recovery of loans? Are they satisfactory?

Panel No. 6Research and EducationTentative Outline of EnquiryA. Research

1. What are the points where research knowledge has an impact on the cultivators' needs? Does research supply the knowledge needed?
2. What is the system of organising research and who controls? What is the direction of priorities and the relevance of these to needs at the cultivators' level?
3. Is the personnel for research adequate in quantity and quality?
4. What are the research agencies and are they adequately coordinated with each other?
5. Is research adequately coordinated with the agricultural extension service? Is there an unbroken chain from research trial to demonstration plot to farm usage? Is there a two-way contact regularly bringing the points of research to the cultivator and the problems of the cultivator to research?
6. Is there integration or coordination of research with education? Which is the best method?

B. Education

1. In undergraduate and post-graduate training in agriculture, are there enough institutions and is the training adequate? Are the numbers and quality of the trainees adequate? Are the facilities, status and pay of the staff and of the trainees adequate?
2. Should the control of agricultural education be vested in the universities or the Departments? Is university education too divorced from training for practical life? Is departmental training too divorced from a general education to provide candidates with adequate status and calibre?
3. Is education in crop husbandry and animal husbandry adequately coordinated?
4. In the training of graduates, what attention is paid to the great need for managerial and executive competence which may comfort agricultural staff if they are to fulfil their place adequately in the production drive?
5. Are the diploma and certificate courses, and refresher courses adequate to meet the need for them?

Panel No. 7Agricultural extension, Village-AID, Irrigation, Revenue and other Government Departments affecting the cultivator level, and Local Councils.Tentative Outline of EnquiryA. Agricultural Extension

1. What is the extent and location in the country?
2. Is it adequate in numbers, quality and training?
3. Has it adequate facilities, status and pay?
4. What are its functions? Is it enough in contact with cultivators? Is it overloaded with supply duties? Would it be better to have these off to a separate organisation? or better to retain them but to increase accounts and stores personnel?
5. What is Agricultural Extension's relationship with other agencies at all levels? Is it coordinated? Does each department maintain a front line man at cultivator level? Would it be better for production if all agricultural questions at that level were channelled through one man? Should that man be from Agricultural Extension or from Village-AID.

B. Village-AID

1. What is the extent and location in the country?
2. What is the philosophy of Village-AID? Is it effective in increasing agricultural production? What is the extent of its preoccupation with other duties.
3. Can Village-AID and Agricultural Extension be combined in one front-line person? Can the long term aim of Village-AID be coordinated with the short term need for quick results in production? If Village-AID and Agricultural Extension are both necessary, what mutual contacts and division of duties can keep them pulling together?
4. Are Village-AID personnel adequate in number and quality? Are they sufficiently in contact with cultivators?
5. What should be the relationship of both Agricultural Extension and Village-AID to Cooperative and Local Councils?

C. Irrigation

1. What are the duties of the field staff of the Irrigation Service? Have they any effect on production?
2. Could their duties be fitted in with Extension? Does any service teach cultivators the art of irrigation?
3. Is there any research into the optimum usage of water?
4. What is the system, as actually applied to distribution of water? Is favouritism or pressure applied? Does adequacy of water depend on the farm's position on the canal?

D. Revenue

1. What is the organisation of the Revenue Service?

2. Does it at present have any responsibility in the production drive? Is any production drive likely to succeed without the Revenue Service's active support?
3. If the Revenue service was instructed to place agricultural production at the top of its priority list of duties, would the power and prestige of the service substantially alter the position? Is there any virtue in the District Team concept, where in the Revenue Officer would be Chairman and Chief Executive of a team of technical department officials charged with cooperating in the production drive? What additional staff would be necessary to make such a concept effective? Are men of the necessary managerial calibre available in the Revenue Service?

E. Other Government Departments

1. Which other Government departments affect the cultivator level?
2. Which of these really need their own front-line man in contact with the cultivator, and which could operate through one general extension officer?

F. Local Councils

1. Where will Basic Democracy Councils be located?
2. Would they be feasible instruments to increase production?
3. How would they fit in with other agencies?

Panel No. 8

Cooperatives

Tentative Outline of Enquiry

1. What is the extent and location of cooperatives?
2. What are their functions?
3. Could they be used as a front-line instrument for channeling supplies, credit and marketing to cultivators?
4. Is agricultural improvement part of their scope? Could they be used as a management unit for a number of individual farmers?
5. What degree of external authority and initiative would be needed if cooperatives were used as a management unit? Is it reasonable to suppose that they could be trained for self-management and the external authority withdrawn at some later date?
6. Could the cooperative department assist in such training? What is the adequacy of their personnel in training managers and members?
7. What is the general reputation of cooperatives? What is needed to enhance it? Are there any good cooperative districts?

at the cultivator level? Are shelter belts needed to supply animal fodder? How are these needs best met?

2. What is the extent and location of forestry needed for national conservation purposes? What contribution would it make to land and water use and flood control, and where?
3. What is the potential of commercial forestry to save imports and increase exports?
4. How can forestry best be coordinated with Agriculture and range management? Are there border land difficulties?

B. Soil and Water Conservation

1. To what extent can anti-erosion measures, contour bunding dams in gullies, etc, make a serious impact, either by making land more productive or stopping it getting less productive. Where are the districts affected?
2. Has soil and water conservation to be considered when holdings are consolidated and drainage introduced? How are such measures best coordinated?
3. Has it also to be considered when range management and colonisation is proposed? If

Panel No. 10

Fisheries

Tentative Outline of Enquiry

1. What is the importance of fisheries at the cultivators' a source of food? To what extent are they valuable to and health? Where are such fisheries mostly located?
2. Are fish of financial value to the cultivator? Do they e with crops for land or water?
3. Have fisheries fallen into decay? Is it possible or des to extend them to new areas?
4. What is the relevance of sea and river fishing to food or to earn foreign exchange? Where are such fisheries?
5. What are the problems of storage, refrigeration and r of fish?
6. Is there any organisation for production and conserve fisheries?

Panel No. 11

Colonisation

Tentative Outline of Enquiry

1. What is the location and extent of potential colonisation areas?
2. What is the location and extent of potential development areas, not specifically earmarked for colonisation? (for example in Baluchistan and in the Haor area in East Pakistan).
3. Is adequate and coordinated pre-investigation made in colonisation and development projects?
4. Is irrigation, land development, and land use adequately coordinated in such projects?
5. Is there efficient community planning of roads, water supplies, village and market sites, and housing?
6. What are the objectives of the land allocation policy? Is it related to the problem of consolidation in overcrowded areas? Is there a policy for choice of land-owners, cultivators, size of holding, etc? Is the land allocation policy at all related to the problem of production?
7. Is there any provision of coordinated services to cultivators in colonisation schemes, both before arrival and after arrival, to ensure maximum production?
8. What method of coordination and control would be likely to ensure the maximum productive use of potential colonisation areas in the National interest?
9. Has the time come, at least in such areas, for farming to be considered not merely as a way of life but as an integrated process which required planning like industry?

Panel No. 12OrganisationTentative Outline of EnquiryA. What are the main factors which an organisation must supply for effective results?1. Coordination of all links in the chain of production

For example, without land consolidation, application of productive techniques are wasted. Without a satisfactory system of land tenure, credit and marketing, a cultivator may undoubtedly fight shy of new methods whose failure could ruin him and whose success chiefly benefits landlords, money lenders and merchants. Without plant protection, investment in other production techniques may be nullified. Without proper use of water and coordination between agriculture and irrigation, achievement of increased production may be imperilled.

2. Management

In the absence of fully developed commercial enterprise enabling the cultivator to arrange such coordination himself, there must be effective management somewhere in the organisation to do so.

3. Coordinated service within the cultivator's reach.

There must be front-line men, ^{the} ~~near~~/farmer, able to contact an optimum number of cultivators to get effective results, and they must be of the right calibre to do so. They must have at hand the necessary stores, clerks, and transport. For financial and other reasons, the front line efficient minimum of personnel.

4. Line of accessibility

Behind the front-line, there must be a smooth chain of accessibility not only to supplies but also to specialised knowledge and research.

5. Freedom to Manage and Accountability

There must be both decentralisation to enable management to operate flexibly and efficiently, and control, by budgetary and other means, to ensure accountability and pin point responsibility.

6. An eventual social aim of self-management

A managerial system is required to meet the immediate need for increased production, but it is not an end in itself. Extended too long, it might encourage a society merely waiting for orders, whereas its real purpose should be, by raising the standard of living, to build up a self-reliant community capable of conducting its own affairs. This means the pari passu with an efficient system to ensure effective production, there must be encouragement of representative organisation, (whether of cultivators through cooperatives, or of local councils) and operation in partnership with such bodies to facilitate cultivators and citizens standing on their own feet.

7. The degree of need for organisation and for managerial emphasis may well vary in place and time according to available facilities

to supply all the cultivators' needs, and according to the competence of the cultivators. A detailed plan of such organisation would need to be worked out for typical representative areas, and consideration given later as to how far such plans could be applied on a nation-wide basis.

8. A particular point for consideration is whether and in what circumstances sanctions are required to ensure compliance by cultivators and landlords with managerial instructions.

B. Examination of the present Government Services. Can they be reorientated to an effective organisation?

1. Manpower for services concerned with agriculture

- (a) What are the short comings, related to envisaged needs? for research, seed multiplication, fertiliser, plant protection, for agricultural extension and village-AID?

(b) Training

Are existing institutions sufficient? Do they produce adequate numbers? Is the training orientated right for the jobs to be done? Is there need for more training abroad, or for in service and refresher courses?

(c) Conditions of Service

Are present inducements equitable and sufficient in regard to status, pay, promotion, housing, transport and training for higher posts? Should the present division between the policy-making Secretariat and the technicians continue?

2. Procedure

(a) Approvals

Before money can be spent, the project has to be approved, then included in a budget, and then sanction obtained for actual expenditure. Can this procedure be more streamlined?

(b) Expenditure sanction

Is delay due to inadequate detail in budget? or to more administrative centralisation?

(c) Recruitment of Personnel

Is delay due to need for sanction for staff, pay scales etc? or to difficulty in finding staff? Does rigid adherence to seniority frustrate younger men?

(d) Procurement of Equipment

Is delay due to shortage of supplies? or foreign exchange? inadequate share of agriculture in foreign exchange? cumbersome procurement procedure after allotment of foreign exchange?

3. Division of Responsibility between Centre and Provinces

- (a) As agriculture is a provincial subject, can the national need

be best secured by policy directives, or by control of funds?
 How can the Centre ensure that the provinces carry out the job?
 Should the Ministry of Food & Agriculture, or Finance, or the
 Planning Commission be responsible to see that the job is done?

- (b) Should the Centre take on specific supply jobs like plant protection and fertiliser?
- (c) As the Centre has to import food and find foreign exchange, should it control provinces in food procurement policies and prices?

4. Coordination between Departments

- (a) Coordination is essential between:-

Agriculture and Animal Husbandry.

Agriculture, Animal Husbandry, Forestry and Soil Conservation.

Agriculture and Irrigation.

(Survey, water supply, drainage, selection of crops and rotations).

Agriculture and Credit.

(Credit sources are Revenue Department, Agricultural Bank and Agricultural Development Finance Corporation. Should they be amalgamated in one unit?)

Agriculture and Cooperatives.

Agriculture and Village-AID

(Which has the farmers' confidence?)

Agriculture and Colonisation

(Revenue department controls colonisation but agriculture is interested in selection of land and settlers, levelling of land, cropping patterns and guidance of settlers).

Agriculture and Food Procurement

(Agriculture is interested in methods, areas and prices of food procurement policies).

How are all these best coordinated?

5. Decentralisation to Local Levels

- (a) Should programmes be determined at district and lower levels, where soil variations, water needs, crop patterns, and people's characteristics are known?
- (b) Have local agricultural staff any say in planning and authority in decisions affecting their area?
- (c) Within what limits can Tehsil, Thana, District and Division make decisions and initiate action?
- (d) Should the Agricultural Extension Officer be a general man representing all departments? Which departments really need their own front-line man? Would Village-AID be a better location for a general front-line man?
- (e) Can capable personnel be found for general front-line posts?
- (f) Can the concept of a District Team, with a Revenue Officer as Chairman, and technical officers associated, provide sufficient coordination & drive to attain effective production?

- (g) Can a Revenue Officer's training and outlook be reorientated to a production objective, and have they time and staff sufficient for it?
- (h) What alternative coordination of government services at local level would be better?

6. General

- (a) Can government service attitudes be reorientated from law and order and revenue complex to an economic and social development complex? In particular, can the managerial aspect be introduced into the government machine in addition to the supply and Extension Service aspect?
- (b) At the front-line can the managerial aspect be reconciled with the Village-AID, Extension Service and Cooperative aspects if the Government machine is used?
- (c) Can the seniority and education rules in government services be altered to allow promotion and responsibility to men with executive ability but perhaps without educational or seniority qualifications? Can a man be sacked for inefficiency in government service to the degree needed by the managerial function?
- (d) Can financial and office routines in government service be modified to give the necessary freedom for initiative and drive required by the managerial function?
- (e) Should a special group in government be created "expeditors" responsible to implement effective production?

C. Reorganisation on a Functional Basis

- (a) Can certain supply functions be safely left to commercial enterprise (or to producers' organisations) such as seed distribution, fertilisers and plant protection, leaving government services free to concentrate on research and extension? Where could this be done and what are the prospects of it being coordinated properly?
- (b) If private enterprise cannot be relied upon for such purposes, should a statutory corporation be created to do them? What should be its coordinating machinery with Government departments and cultivators?

D. Reorganisation on a Location Basis

- (a) Should a Statutory Authority be created to coordinate and manage in colonisation areas?
- (b) Are there any places in settled areas where such an authority might be tried? Could it be tried either in direct contact with peasant proprietors or through selected zamindars?
- (c) What would be the functions of such an Authority and the extent of its control? What Government departments would remain and what would be their functions? How would the Authority and the Government departments be coordinated?

- (d) Could such an Authority find personnel? Could these be recruited on a character basis (not on seniority or educational qualifications or even on age limitations) by open recruitment? Would this leave government departments too weak or would it actually assist them by relieving them of the burden of supply and managerial functions?
- (e) Could such an Authority pay independent pay scales and use independent methods of promotion on merit different from Government services?
- (f) Would a jealousy complex tend to defeat the success of such an Authority, especially by organisations having influential position or prestige and patronage with cultivators? How can this be overcome

Panel No. 13Agricultural Economics and Production TargetsTentative Outline of Enquiry

A. Economic considerations over which the farmer has control. (This involves studies in management techniques in relation both to changing the pattern of production and to raising output on individual holdings according to the needs of national production policies.)

1. To what extent is the pattern influenced by prices of both purchases and sales?
2. How is the free play of market prices modified by government action and what policy changes may be necessary in price fixing?
3. Is the farmer's response to financial incentives conditioned by his inability either to appreciate or to adopt improved methods? What are the limiting factors? Could crop and livestock insurance be important?
4. How far is the farmer's response to demands for raising output limited by the availability of aids to production (improved seeds, fertilisers, plant protection techniques, etc)?
5. Is reliable information on improved practices available?
6. How do the availability of labour, draft power and mechanical equipment at periods of peak demand influence production? Can the effect or the intensity of peak demands be minimised or the pattern be changed by the introduction of better methods?
7. Does the farmer appreciate the long term dangers (including salinity, water logging, overgrazing and soil erosion) which may be inherent in some methods of production? Does he sometimes ignore the danger for the sake of immediate gain? Is he, in any case, in a position to change his practices even when he appreciates the dangers involved? How far can the farmer take independent action?

B. Economic considerations outside the farmer's control

1. What has determined governmental price fixing policies in the past? Have they been designed to raise the returns obtained by producers or to depress prices paid by consumers?
2. How has agricultural production been influenced by subsidies, or by taxation and tariff policies? Have such methods been successful? Has success or failure been determined by the activities of middlemen?
3. How have production patterns been influenced by interference with the free play of markets?
4. How does the availability of credit influence the pattern of production and production as a whole?
5. Does competition for scarce financial and physical resources between developments in agriculture and industry affect agricultural production?

6. Can increased returns from higher production be channelled, at least in part, towards increased investment in agriculture? To what extent will the amount of surplus available for investment be determined by the size of farm income?
7. How can under-employed labour be used in the formation of capital investment (minor irrigation and drainage works, etc., diversification of production)?
8. Is the availability of investment surplus influenced by particular production patterns, e.g. sugarcane production? Could this, in turn, influence governmental production policy and the control of imports? What changes are desirable?
9. Can the availability of U.S. P. L. 480 surpluses be more definitely linked to building up the agricultural productive efficiency in Pakistan, thereby making its use more of an investment than a charity operation, and enabling Pakistan ultimately to dispense with it?
10. What natural advantages does Pakistan have in particular forms of agricultural production which can be used to meet internal needs or be expanded for export? Is national self-sufficiency desirable under all circumstances? What forms of production are most advantageous (or least disadvantageous)? *
11. In what way do the economic influences as a whole affect the total agricultural production, which is the central objective of the Commission's work?

Answers to these problems will involve:-

- (a) Commodity studies.
- (b) Determination of production targets, and especially those for food grains, in relation to consumption needs, as regards both population growth and improved nutritional standards.
- (c) Regulation of production, e.g. limitation of area and output of jute and zoning of cotton varieties and location of sugar production.
- (d) In suggesting targets consideration should be given also to the needs for foreign exchange, to the value of alternative forms of production, to alternative claims on water and other forms of resources and the potential markets at home and overseas. (Special attention should be paid to the increased yield of oil following the raised target for cotton lint).
- (e) The reconciliation of the provision of incentives to the producer with the conflicting need to keep down consumer prices.

Panel No. 14Food ProblemsTentative Outline of EnquirySECTION IA. Background information

1. Area and production of wheat, rice and other foodgrains.
2. Imports of rice and wheat over the last 10 years.
3. Exports, if any of rice, wheat and coarse foodgrains over the last 10 years.
4. What is the present food organisation? What is its cost & efficiency?
5. Food requirements of the country on the basis of total foodgrains and of wheat and rice separately. Indicate, if possible, the annual fluctuations in consumption, if any, and the causes for them.
6. What are the normal surplus and deficit areas?
7. The difference in consumption patterns of foodgrains in rural and urban areas.

B. Procurement price

1. What have been the rises in procurement prices over the last 10 years and causes therefor in case of rice and wheat? What is their correlation with world prices?
2. What has been and is correlation of prices of rice and wheat with other foodgrains in the past and at present?
3. Is there any evidence that rise in procurement prices of rice and wheat has resulted in increase in area or production? How much of such income actually reaches the producer?
4. What are the chances of rise in production if prices are still further raised, say to Rs. 18/- per maund in case of wheat and Rs. 30/- per maund in case of rice in East Pakistan?
5. What have been the bottlenecks in the present system of procurement in West Pakistan? Why has it been necessary from time to time to change from monopoly procurement to voluntary procurement and back again? What is the value of cordoning?
6. What has been and is the status of smuggling vis-a-vis foodgrains in East and West Pakistan?
7. What is the status of hoarding? Can it be controlled by banks agreeing to give credit for short periods only? Is the hoarding mainly at the producer's level or in the hands of distribution trade? Are controls effective to check it?
8. What has been the percentage of procurement from levies in East and West Pakistan as against total procurement of rice and wheat?

9. Would it be desirable to fix a floor and a ceiling price for wheat and rice with the proviso that government should procure if the price falls below the given price, or should use its reserves if the price rises above the ceiling price? •
10. Would the entry of private trade into foodgrains operations have any effect on the farmer's price? Would it act as an incentive or disincentive?
11. In case a reserve is building up with American wheat under PL. 480, what is the minimum period during which imports by Government will be needed before private trade establishes itself? What would be the arrangements in a year of short production, specially when, on normal cycles out of each 5 years, there are two bad years? How would you revolve such a reserve to maintain quality of foodgrains?
12. In case a reserve of 500,000 tons of wheat is available which can be replenished over the next 3 years, will it help to establish trade?
13. In India recently, private trade worked very well in foodgrains until a heavy shortage developed in production. If such a situation arises, can you suggest any remedies for meeting the situation, without controls?
14. What is the minimum reserve required to cover foodgrain distribution needs separately for wheat and rice? Is good storage available for this?

C. Organisation

In case private trade is brought into procurement and distribution of foodgrains, what will be the minimum organisation required if the government has to procure below a certain floor price and to distribute above a certain ceiling price? Would it be necessary to retain the present staff? What will be the organisation for getting full and immediate market information?

D. Distribution

1. Is private trade in foodgrains well organised for distribution? If not, will it develop quickly if private trade is given the responsibility of all types of dealings in foodgrains? Is financial backing available? How would you meet temporary shortages in local areas in case the trade movements take some time in that area?
2. What effect would the need for profit and the expenses of trade have on the consumer's price? How would it compare with government operations?

SECTION II

The report on this Section is requested not later than 15th of March 1960.

1. Can a reliable estimate be given of average per capita consumption of (a) wheat in West Pakistan
(b) rice and wheat in rice growing area of West Pakistan
(c) rice in East Pakistan?

How would the consumption differ with the rise and fall of prices of these foodgrains?

2. How has the pattern of consumption of coarse foodgrains developed? Are they being consumed as (a) human food (b) cattle feed, in an increasing or falling measure? Has the rise in prices of coarse foodgrains led to increased consumption or reduced consumption? Does the wheat off-take in West Pakistan fall with increased production of coarse foodgrains or not?
3. What are the reasons for the lack of confidence in the existing food policy? Is it due to the fear of the farmer that in years of shortage his needs are not met? If so, are there any remedies? Would village storages, against which credit would be obtained, improve the situation? Would the existence of visible reserves restore the confidence and bring more foodgrains into the market?
4. Is the standard of living generally rising? If it is, what impact has it on the consumption of foodgrains? Has it led to more consumption of poultry, meat, fish and vegetables?
5. Is the present food consumption in Pakistan balanced from nutritional angle? If not, what is the imbalance and what foods will remedy the imbalance?
6. Is it possible to make a major change in the food habits of the people? Can more use of potatoes in lieu of foodgrains be encouraged? If so, what steps would be necessary? Can similar use be made of other crops?
7. Is it possible to extend the use of readymade bread in the main consuming centres as against the issue of foodgrains? How far can other foodgrains be mixed with wheat in the making of bread and flour without reducing nutritional values? Would it be possible to increase nutritional values of bread and flour by fortifying them with protein foods?
8. Would you recommend that agricultural policy should lay down the necessity of achieving self-sufficiency in cereals? Or, would you recommend concentration on increasing the production of crops earning more foreign exchange to meet the food deficits that may arise? How would you correlate these alternatives with the need for more foreign exchange for development and for rise in standards of living in rural areas?

Panel No. 15C O T T O NTentative Outline of EnquiryA. Background Information

1. What is the area grown and production by zones and varieties?
2. What are the average yields by zones and varieties?

B. Discussion of the positive measures necessary to increase production upto the target of 2.5 million bales without interfering with the production of other crops

1. Cultural practices

- (a) What increase of yield can follow the adoption of line sowing? What are its advantages? Have line and ridge sowing (as practised in many other countries) been compared under a wide variety of conditions?
- (b) How can inter-cropping in cotton fields be discouraged?
- (c) What implements and what techniques can be recommended for inter-row cultivation following irrigation?
- (d) By what date should cotton sticks be removed from fields is a phytosanitary measure? Should this be controlled by legislation?
- (e) To what extent should mechanisation, including implements of all kinds, be encouraged?
- (f) What rotations are followed and what better system could improve cotton production?

2. Fertilisers

- (a) What applications of fertilisers are recommended in different areas? Are such recommendations based on reliable and exhaustive experimental work?
- (b) What is the maximum requirement of fertilisers based on the present application recommendations?

3. Plant Protection

- (a) In a normal year, what plant protection measures are required? Is this requirement being met at present by the farmer, or by Governmental or other services? If not, what measures are required?
- (b) What organisation is required to deal with abnormal outbreaks of pests and diseases? Is the present position satisfactory?
- (c) How should plant protection services be paid for when they are carried out by the farmer himself?

4. Seeds

- (a) What is the present position regarding the supply of:-
 - (i) foundation and nucleus stocks
 - (ii) commercial stocks to farmers?

- (b) To what extent do the ginneries supply the commercial stocks of improved seed available to farmers?
- (c) What arrangements are made to control the quality (purity and germination) of seed supplied by ginneries? How can production and distribution of improved seed be brought about? What standards should be set up?

5. Research

Is present research adequate? Are ginneries and factories satisfied with the types and qualities of cotton available?

6. Organisation

What organisation should be set up to achieve this increase in cotton production by 1965 on a special programme basis? What role should the Pakistan Central Cotton Committee play in this? Should the functions of the PCCC be broadened to include development programme in addition to research on cotton?

C. The removal of dis-incentives as a means of raising production

(Many of the aspects covered in this section will be of a preliminary nature and will be discussed more fully later in the main report).

1. Does the price paid to farmers encourage them to produce more and better quality cotton? If not, could the price be raised without raising the price of finished or partially processed materials? Could the margins obtained by ginners and manufacturers be reduced? Could marketing methods be improved so that middlemen's profits could be reduced?
2. Are the conditions of credit or lack of credit dis-incentives to production? What forms and sources of credit are available to landowners, tenants or small holders? Are systems of preharvest crop purchase operated by money lenders or others? To what extent do these operations affect the farmer's standards of production?
3. Is the form of credit related to the system of tenancy?
4. To what extent has zoning by variety been effectively enforced? Are improved varieties grown to the exclusion of all others in individual fields and zones? Is there illicit movement of cotton from one zone to another? Is zoning enforced by law?
5. Are ginning practices so unsatisfactory that they eliminate much of the benefit obtained from growing improved varieties?
6. Are facilities for fertilizer distribution satisfactory? If not, is this one of the reasons for keeping production levels low? Does the price of the fertilizer make its use an attractive proposition? Are farmers satisfied with the results obtained from using fertilizers? Are tenants deterred from using fertilizer because they have to share the benefit with the landlord, but bear the costs themselves?
7. Are water-logging, salinity and flooding factors which seriously inhibit both the area grown and the yields obtained?
8. Do returns obtained from other crops, for example sugarcane, deter farmers from growing cotton?
9. Are the systems of distribution, availability or use of water limiting factors to production?

D. Is the proposed target realistic?

What is the evidence that the quantities estimated for export can find a market? Is the present export subsidised by foreign exchange allocations which might be used for other nationally important imports? Can an export trade be built up without such protection? In what varieties would this be most likely to be successful?

Panel No 16Agricultural IndustriesTentative Outline of EnquiryA. Fibre Crops1. Cotton

- (a) Are present facilities for ginning (including those for cleaning) adequate? Should the use of saw gins be encouraged? Are spare parts for gins available in adequate quantity?
- (b) Does the quality of cotton deteriorate in store at ginneries while awaiting processing?
- (c) Are facilities for delinting adequate? Should the process be compulsory? What is the present production of linters and method of disposal? Could production be raised?
- (d) Is there scope for expanding the textile industry for home consumption and export?

Jute (See the report of the Jute Commission when available)

- (a) If jute production is increased, could facilities for processing and manufacturing be profitably increased and can factories in foreign countries under bilateral arrangements be supported and developed?
- (b) Are there adequate facilities for technological research?
- (c) Is the baling potential adequate? Does it need improvement with reference to siting, location and efficiency?
- (d) What industries could utilise jute by-products?

3. Coir

What steps should be taken to develop the coir industry?

4. Other fibres

Could any other forms of fibre processing be encouraged (ramie, flax, etc.)?

B. Oil Crops (This should also be discussed in the Economic Panel)

- 1. What is the present production of vegetable oils of all types? How are they used? Should production be expanded and for what types of oil? Should production of new types be expanded, e.g. safflower (Carthamus tinctorius), sunflower or soya?
- 2. Are present processing methods efficient or could they be improved to give better quality oils? Is research on improved varieties aimed at producing high yields of oil? (The more important crops should be discussed separately).
- 3. How are the residues, following crushing, utilised? Can the production of cakes and meals for livestock be expanded?

4. Does the coconut oil industry in East Pakistan receive adequate attention? If not, how could it be developed?
5. Could linseed oil production be developed?
6. Is there a wider market for castor? Exports? Could production be increased? Should exports consist of seed or oil?

C. Sugar Production (The report of the Sugar Commission should receive careful attention.)

1. How should the supply of canes to the mills be organised? Should there be production areas attached to each mill? How large should this area be, if this is desirable?
2. How is centrifugal sugar production organised? Should this be encouraged?
3. Is there need to improve methods of gur production? If so, what improvements are practicable?
4. Should future expansion of the sugar industry involve construction of more factories of the present type, or should future development concentrate on refineries which could utilise a partially processed or raw product? (e. g. gur and the product from the centrifugal process.)
5. Should long-term contracts be made between growers or growers' associations and growers cooperatives and the mills? How can prices be adjusted?
6. Can the period of availability of cane be extended so as to lengthen the season of processing and thus improve the efficiency, and reduce the cost of production? How could this be done?
7. Could sugar beet be grown and also assist in spreading the period of availability of raw materials?
8. How are by-products (molasses, bagasse) utilised? Could they be used more efficiently? (Industrial alcohol, livestock feeds, yeast production, fibre board, etc.)

D. Cereals

1. What facilities exist for wheat and rice milling at present? Should they be improved and how? How are mill by-products utilised?
2. What is present production of starch? Should it be expanded?
3. Could food processing be expanded (bread, biscuits, breakfast cereals, etc.)?
4. To what extent are cereal by-products used in animal and poultry feeds?

E. Tobacco

Are present curing processes efficient? What steps should be taken to improve local Virginia types so as to replace imports?

F. Tea

How far can the industry be improved and expanded?

G. Forest Industries

1. What is the extent of the present forest reserves? Can they be exploited fully? Can they meet present and potential needs for timber, for fuel, construction, furniture and sports industries, etc.?
2. Are facilities for processing (sawing, seasoning, etc.) adequate? If not, how could they be improved?
3. Can cottage industries and small scale manufacture of wood products be expanded and improved?

H. Livestock Industries

1. The meat industry

- (a) What preservation and processing can assist in overcoming the present shortage of meat? Should abattoirs be constructed in production areas? Can refrigeration facilities, in both stores and transport, be improved? (Prevention of losses by slaughter during periods of maximum availability and through movements on the hoof over long distances.)
- (b) Are slaughter house by-products utilised fully? If not what could be done? (animal feeds, glues, bone meal, etc.)

2. The dairy industry (The report of the FAO Specialist, which is now being produced, should receive special attention.)

- (a) What methods are at present adopted for the collection, processing and distribution of liquid milk supplies? To what extent is liquid milk pasteurised? How can these facilities be improved (collection, milk depots, processing plants, and distribution arrangements)?
- (b) How can the manufacture of milk products (butter, ghee, cheese, etc.) be improved and expanded?

3. Hides & Skins

How efficient is the present industry (flaying, curing, tanning, grading, etc.)? Can it be improved and if so, how?

4. Wool

What types of wool are produced and how are they utilised? Should production of the present kinds of wool be expanded and techniques of processing improved? Or should attention be given to production of finer quality wools (this must be related to sheep breeding policies)? Could cottage industries base on wool and the production of speciality items be encouraged? How can this best be done?

I. Fisheries

What scope is there for expanding the canning and curing of fish? Could the by-products (meal, liveroil, etc.) be utilised to greater advantage?

J. Minor industries

What is the position regarding minor industries based on agriculture (including guar, spices, medicinal plants, honey, silk, fruits and vegetables)?

K. Manufactures associated with agriculture

1. Artificial fertilizers

Has the potential local demand been assessed for the various types of fertilizers? What is the estimated production potential of present factories and those under construction or projected? Is there need for further development to meet local needs and potential export demand?

2. Agricultural machinery and implements

What are present facilities for the manufacture of tools machinery and implements, including:

- (a) improved tools and implements,
- (b) irrigation machinery,
- (c) farm machinery, including small sized garden tractors, and
- (d) land reclamation machinery?

To what extent can all needs be met by local manufacture, by progressive expansion of the industry? How can servicing and maintenance be assured?

3. Plant protection chemicals

What materials are produced in Pakistan? Could their formulation and production be expanded?

4. Utilisation of city waste and sewage for manure

Has consideration been given to such processes?

Panel No. 17Agricultural StatisticsTentative Outline of Enquiry

1. What is the present position, organisation and method of collecting agricultural statistics relating to crop production and acreage, irrigation and livestock production?
2. What is the reliability of these statistics?
3. Is the coverage of these statistics complete? What other information needs to be collected and what new series need to be started?
4. How can sample surveys be used to improve our agricultural statistics of area and yield?
5. How can the time lag in the compilation of statistics be reduced to the minimum?
6. A number of crop estimates is now issued each year for different crops. Should the number be decreased or increased? Is the present publication of Season and Crop Reports useful? Does it require improvement? What agency should handle it?
7. What would be the proper organisation for collection, compilation and publication of statistics at the village, district, provincial and central levels? Can the objectives of such an organisation be achieved by coordination between various services or would a more streamlined organisation be required?
8. Are there any other factors which would improve the authenticity and availability of agricultural statistics.

APPENDIX III
QUESTIONNAIRES

GENERAL QUESTIONNAIRE

I. Food Procurement:

1. (a) Are you a producer of foodgrains? Which foodgrains do you produce?
 (b) What were the quantities of each foodgrain (in maunds) you produced during the last year and from how many acres each?
 (c) How much of these did you retain as food and how much for other purposes like seed, livestock feed, etc.?
 (d) How much wheat or rice and other grain do you annually require for your family use per head of an adult and minor?
 (e) How much did you sell and where? What price did you get for sale in the village and for sale in markets?
 (f) Did you give or take on loan any foodgrain or did you purchase any? If so, what quantity and at what prices? Which were the foodgrains?
 (g) Have you increased or decreased the area under sugarcane, cotton jute, oil seeds, or foodgrains in your farm as compared to the area you put under each of these crops 5 years ago?
2. Do you consider the present price at which you sell your rice and wheat to Government as reasonable? If not what price do you suggest? Please give reasons.
3. Do you think the price that you suggest will result in increasing the acreage under rice and wheat? Would you grow more rice and wheat if that price is assured? Would any rise in this price should increase acreage?
4. If the price of wheat is higher than that of maize, bajra, or sorghum, would you grow more wheat?
5. (a) If the price of jute is below Rs. 20/- per maund, would you grow more rice or would you grow more jute?
 (b) If the price of jute is above Rs. 20/- per maund, would you grow more jute or rice?
6. What other incentives do you suggest for increasing production of wheat and rice? Would you suggest a change in the taxation structure to act as incentive? Please give details.
7. Do you find any difficulty in the present methods of Govt. procurement of rice and wheat? If so please give details.
8. Would you recommend continuance of purchase of rice and wheat by Govt. at a fixed minimum price or would you like the foodgrains trade to be completely free from Government control? Please give reasons.
9. If you think Govt. should continue procurement of foodgrains, what method of procurement would you suggest? At present three systems have been in operation from time to time?
 (a) Levy.
 (b) Monopoly procurement.
 (c) Voluntary procurement.
10. Would you recommend cordoning of surplus areas?

11. (a) Would you recommend the establishment of warehouses which can advance credit against storage of foodgrains, the farmer being free to take back his grains when needed? If so, would you recommend that they be established through Government, special corporations, union panchayats or cooperative agencies?
- (b) Would you recommend that such a system should operate in addition to Government or private trade agencies for purchase of surplus wheat and rice?
12. (a) Would you recommend the establishment of an overall statutory organisation for supervising and developing foodgrains reserves, storage and policies?
- (b) Would you recommend that such an organisation should arrange purchase directly or through private trade at a declared floor price and use its reserves for price stabilisation?
13. (a) Would you recommend establishment of permanent revolving reserves of foodgrains? If so, what would be your suggestions for their size for wheat and rice?
- (b) How would you replenish these reserves?
14. Would you consider that such foodgrain policies should be limited to rice and wheat only? Or would you extend this to other food crops? If so, which of them?
15. (a) If you are a consumer only would you prefer to get atta rather than wheat?
- (b) Do you find the present sale price of wheat and rice reasonable? If not what price would you suggest? Please give reasons.
- (c) Would you suggest special arrangements for supply of maize, bajra and sorghum in urban areas?
16. Do you think there will be less pressure on wheat or rice if chickens, fish and vegetables are available at a cheaper price? If so, what minimum prices would you suggest for principal varieties?
17. Would you eat more potatoes or sweet potatoes if their price is reasonable? Can you suggest a price?
18. Do you consider the present storage for foodgrains adequate? If not, what are your suggestions?

II. Statutory Bodies:

19. Do you think agricultural development particularly food production will be speeded up, if statutory authorities on the lines of PIDC, WAPDA or TDA were established to deal with the subject? If so, what subjects should be handled by them? Please give reasons.
20. (a) Do you think nation-wide activities such as fertilizer distribution, seed supply, plant protection, supply of implements and equipment, etc. should also be taken up by these bodies besides specific regional or zonal projects? Please give reasons.
- (b) If the answer to question(a) is yes, do you think it will be

necessary for these bodies to take over agricultural extension work as well in order to produce maximum results in the shortest possible time? Please give reasons.

(c) If the answer to question (b) is yes, what should be the relationship of these bodies with the Departments of Agriculture, Animal Husbandry, Fisheries, Village-AID, Cooperative Societies, etc. and what should be the fields of departmental activities? How should the work be coordinated? Please give detailed reasons.

21. Should there be one such body for the whole of Pakistan or one for each of the two provinces or separate area-wise and subject-wise authorities or there should be a national or two provincial organisations with sub-organisations under them to deal with specific territorial or subject-wise projects? Please give reasons.
22. What are your suggestions about the constitution of such an organisation or organisations? How would you finance its operations?
23. Should it or should it not have any controlling voice over the organisations operating in the agricultural field and should it be given any authority over the farmers to ensure scientific land management and use? Please give details.

III. Agricultural Extension:

24. To whom do you look for advice and help in agricultural matters?
25. What help have you received from the Agriculture Department, say, during the last one year? Please give particulars.
26. Is the extension service of the Agriculture Department adequate and effective to meet the diverse needs of the farmers and to induce them in adopting improved agricultural methods? If not, state its defects and suggest improvements.
27. Does the extension agent (Union Agricultural Assistant or Mukaddam) of your area keep regular contact with the people of your area personally or through meetings, film shows, demonstrations, exhibitions, etc.?
28. Is this contact sufficient and effective? If not suggest improvements.
29. Have you any difficulty in getting your requirements of seeds and fertilizers from the Govt. Stores or agents? If so, please give your suggestions for improvement.
30. Demonstration plots been established in your area and if so you visited them? Has this helped you and other people of the increasing production? If not, what are the causes?
31. Has there been any crop competition in your area? If so, has this generated sufficient enthusiasm among the people for increasing production through better methods? How far do you think they are useful?
32. Have exhibitions, shows, etc. been organised in your area? Are they useful?
33. Have your crops been attacked by pests and diseases? If so, did you ask for help and if so was it readily available and effective?

34. Have your livestock suffered from diseases? If so, did you receive adequate and effective help from the Department.
35. Has any preventive measure been taken by the department in your area against cattle diseases? What are they?
36. Do you use any improved implement recommended by the Department? What are they and what is your opinion about their availability and usefulness?
37. Are you familiar with the Japanese Method of rice cultivation? Have you practised it yourself or seen it practised by others? What is your opinion about this method?

IV. Plant Protection:

38. What are the common pests and diseases in your area?
39. What do you think is the usual percentage of damage done to crops by them?
40. Are the departmental activities in plant protection satisfactory and efficient? If not what are your suggestions for improvement?
41. Do you report promptly outbreaks of diseases and pests in your area to the nearest extension or plant protection staff? If so, how many times have you done so last year? Was the required help received promptly? Please cite actual instances.
42. Have you received any help from an aerial pest control unit? If so, did you find it useful?
43. Would you like to do your own pest control except in case of epidemics, if equipments and pesticides are made available through private trade or would you like private organisations to do this for you on payment? In case Govt. is to undertake this work would you agree to meet the whole or part of the cost through a cess?
44. If you had any experience about household and stored grain pests, please give the following information:-
 - (a) name of pests.
 - (b) nature and extent of damage done.
 - (c) treatment carried out, if any.
 - (d) results of the treatment.
45. What help do you need from the Government for effective protection of your stored products?
46. Has any reliable instance come to your notice _____ injurious effect of plant protection treatment?

V. Manures and Fertilizers:

47. Do you use artificial fertilizers in your land? If so, what kinds and on what crops?
48. Did you get any increased yield from the use of these fertilizers? If so, how much? Please give results crop by crop.
49. Did you use them in addition to farmyard manure or without it?

50. Has there been any adverse effect of any of these fertilizers on yield of crops or on the soil? Please give particulars.
51. If you have been getting good results by their use, do you use them on crops? If not why? If you do not use fertilizers at all, can you give your reasons?
52. Wherefrom, did you get your fertilizers for the last and the present crop? What price did you pay? Do you get your requirement in time or do you have any difficulties?
53. Would you be prepared to use more fertilizers if they are given to you on 6 months' credit? On what crops would you use them?
54. What are your suggestions for extending the use of artificial fertilizers?
55. On what proportion of your land did you apply farmyard manure during the last one year? What crops did you raise on these lands?
56. Do you normally manure a similar proportion of your land with farmyard manure? Do you do this by rotation in all fields or use it only on a few fields? If so, why?
57. What was the amount of farmyard manure used by you per bigha/acre? Do you use higher quantities for special crops like vegetables, sugarcane and jute?
58. Was the manure produced in your own farm or did you buy it from outside?
59. How many heads of livestock have you got?
60. How do you preserve your farmyard manure? Do you add cattle urine to it?
61. Do you use cow-dung as fuel? If so, what proportion of your total production?
62. Do you use bone meal, oil seed cakes and fish-meal as manures? If so, have the results been satisfactory? Would you recommend their more general use?
63. Do you practise green manuring? If so to what extent?
64. If not, what are the difficulties?
65. Have you been using berseem, mung, masur, mash, etc. as fertilising crops? If so, do you do this on a regular rotational basis?

VI. Seeds:

66. What is the size of your farm? How much of it is self-cultivated?
67. Have you been using improved seeds? If so, for how long and with what results?

68. What are the improved varieites of seeds of principal crops you are using? How do you get your seed supply and how frequently do you replace it?
 69. Do you think that the programme of the Agriculture Department for the supply, storage and distribution of seed is adequate and satisfactory and meets your requirements?
 70. Would you suggest that seed multiplication and its distribution be taken over by private enterprise with certification control by Government?
 71. What should be the purchase and sale price of seed vis-a-vis the market price.
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GENERAL QUESTIONNAIRE (Revised)

A. Background information about the farm.

1. Name.
2. Name of the District and Tehsil in which located.
3. Total Land owned.
4. Number of separate plots of land held.
5. Total land in direct possession:
 - (1) Land owned.
 - (2) Land rented from others.
6. Area owned but rented to others.
7. Mode of irrigation, if any.
8. Area under wheat, cotton, sugarcane, jute rice, and other crops including orchards in preceding agricultural year.
9. Total number of persons in the house.
10. Number of work-animals such as bullocks, camel, etc.
11. Number and type of implements and machineries.
12. Number of milch animals, including cows, buffaloes, goats, etc.
13. Number of fowls, ducks and other birds.
14. Distance of the farm from nearest:
 - (1) Railway Station.
 - (2) Market town.
 - (3) Pucca road.

B. Land Tenure and Taxation.

1. Do you favour consolidation of holdings? Will this lead to increased production?
2. What should be the minimum size of a consolidated block for efficient operation?
3. How should consolidation be carried out? by mutual agreement, by cooperatives, by amendment of the laws of inheritance or by compulsion by law?
4. What is the minimum size of an economic farm unit for the average family?
5. Does your present system of land tenure handicap production? if so, in what way?

6. Under the existing tenancy laws, the landlord can't eject tenants from their land, if he wants to do the farming himself. Is this satisfactory? Does this help to increase production?
7. Does your local form of land taxation affect the farming pattern and thus the production of individual crops and livestock?
8. In your opinion, what should be the basis for land taxation?

C. Land use and crop patterns.

9. Does your present crop rotation give the most satisfactory production? What is it? How can it be improved and what prevents this from being done?
10. Is drainage in your farm satisfactory? If not, what prevents you from improving it?
11. Are crop yields increased by number of ploughings? Can the number of ploughings be reduced by using improved implements? Do you use them? If not, why not?
12. Do you practise line sowing with any crop? If not, what are your reasons?
13. Are your facilities for storing farm products adequate and satisfactory? If not, what are your losses and can they be avoided?
14. Is there a shortage of timber and fuel-wood in your area? What are your views on the establishment of small tree plantations on a farm or village basis?

D. Irrigation and drainage.

15. Is the present system of water distribution in area satisfactory? If you have difficulties, how can they be overcome?
16. What effect do water charges have on your cropping pattern? Is the present method of assessing water charges satisfactory? If not, what are your suggestions for improvement?
17. Do you consider that your total production could be increased:
 - (a) by concentrating water on a smaller area?
 - (b) by spreading water over a larger area?
18. Do you use individually, or as a member of a group, pumps, tube wells or other water lifting devices for irrigation? Is the present arrangement satisfactory, if not how could it be improved?
19. How can storage tanks or ponds be used more effectively for irrigation in your area?
20. What methods, if any, are practised in your area to counteract the effect of salinity? To what extent are they effective?
21. Is the present programme of minor irrigation and drainage works satisfactory? If not, what improvements do you suggest?

22. Is your land satisfactorily protected from flooding by sea water? If not, what protective measures could be taken to improve the situation?
23. Do floods affect your area? Have they been more frequent in recent years? Is there anything you or your neighbours can do about it? If so, what? What can the Government do in this regard?

E. Livestock.

24. Have you enough work-animals available to cultivate your land properly? If not, how do you meet your needs?
25. What proportion of your land do you use to produce fodder for (a) work-animals (b) other livestock?

What proportion of your farm income is derived from livestock?

Could you raise income by more intensive stock raising e.g., poultry, sheep and milch animals? Could this be done without reducing the area of food crops and how?

27. Would you purchase mixed feeds if they were available at reasonable prices?
28. Are there adequate facilities for treating sick animals and controlling diseases in your area? What difficulties do you experience in getting the necessary help?
29. Do you receive help from government in improving the quality of your livestock? What help is available in the form of stud animals, artificial insemination, distribution of improved stock, etc.?
30. Is there any organised management of range lands in your area? If not, could the use of range lands be improved by cooperative efforts and/or the introduction of grazing control?

F. Marketing and Credit.

31. What difficulties do you encounter in marketing your produce? Do you get fair prices? If not, what factors are responsible?
32. Do you get better prices for better quality products e.g. sugarcane, cotton, jute? Could you improve quality of your products if you have price incentives to do so? If not, what are your difficulties?
33. What kinds of sources of credit are available to you? Are they adequate and available in time and place to meet your needs?
34. What difficulties do you experience in obtaining credit and how can they be overcome?
35. Would you prefer to have loans in kind? If so, what are the advantages?

G. Extension.

36. Are you kept informed of new and improved methods and materials that could be used on your farm to raise production?
37. Have you confidence in the people who convey new knowledge to you? If not, have you any suggestion for improvement?

38. Has the Village-AID organisation helped to raise agricultural production in your area? If so, how?
39. Could the organisation of irrigation system in your area be improved?
40. How could the Basic Democracies help to increase production?

H. Cooperation and Farm Management.

41. Do you think that cooperatives could assist you in raising both production and income? In what ways could they be effective in marketing, purchase of supplies, provision of pools of improved implements and supplying credit?
42. Are you in favour of cooperative farming, where land, labour and resources are pooled? What are your reasons for or against?
43. Do you think farm management plays an important part in increasing production and income through better cropping and irrigation patterns, organised credit, marketing facilities, and timely supply of fertilizers, seeds, plant protection measures, etc.? In case you think this will help, what form of organisation would you recommend to develop it?
44. Do you think a farmers' cooperative, which provides joint farm management but no joint cultivation and arranges supplies of such goods and services as improved seeds, fertilizers, improved implements, marketing, credit etc, could be organised? What would be the difficulties in making such cooperatives a success? Would you participate in such a cooperative?
45. In the past, why have so many cooperative ventures not been successful?
46. Is soil erosion a problem on your farm? What measures do you adopt to control it?
47. Would you be prepared to cooperate with others in soil and water conservation measures?

I. Inland Fisheries

48. Are your village ponds fully utilised for fish production? If not, what are the causes and how can these be rectified?
49. What help do you require from government to improve and extend fish culture in your village?
50. Is the position regarding fishing gear for use in rivers and lakes satisfactory? If not, what improvements can be made?

J. Mechanisation.

51. Is there a place for large scale use of agricultural machinery under the present farming system? What types of machinery could be usefully introduced in your area?
52. Would the introduction of such machines bring socio-economic problems by displacing manual labourers? If so, can you suggest any remedies?

SPECIAL QUESTIONNAIRE

I. Food Procurement:

1. (a) Are you a producer of foodgrains? Which foodgrains do you produce?
- (b) What were the quantities of each foodgrains (in maunds) you produced during the last year and from how many acres?
- (c) How much of these did you retain as food and how much for other purposes like seed, livestock feed, etc.?
- (d) How much wheat or rice do you require for your family use per head of an adult and a minor?
- (e) How much did you sell and where? What price did you get for sale in the village and for sale in markets?
- (f) Did you give or take on loan any foodgrain or did you purchase any? If so, what quantity and at what prices? Which were the foodgrains?
- (g) Have you increased or decreased the area under sugarcane, cotton, jute, oil seeds or foodgrains in your farm as compared to the area you put under each of these crops 5 years ago?
2. Do you consider the present price at which you sell your rice and wheat to Govt. are reasonable? If not what price do you suggest? Please give reasons.
3. Do you think the price that you suggest will result in increasing the acreage under rice and wheat? Would you grow more rice and wheat if that price is assured? Would you suggest a different price to assure increase in acreage?
4. If the price of wheat is higher than that of maize, bajra or sorghum, would you grow more wheat?
5. (a) If the price of jute is below Rs. 20/- per maund, would you grow more rice or would you grow more jute?
- (b) If the price of jute is above Rs. 20/- per maund, would you grow more jute than rice?
6. What other incentives do you suggest for increasing production of wheat and rice? Would you suggest a change in the taxation structure to act as incentives? Please give details.
7. Do you find any difficulty in the present methods of Govt. procurement of rice and wheat? If so, give details.
8. Would you recommend continuance of purchase of rice and wheat by Govt. at a fixed minimum price or would you like the foodgrains trade to be completely free from Govt. control? Please give reasons.
9. If you think Govt. should continue procurement of foodgrains what method of procurement would you suggest? At present three systems are in operation from time to time:
 - (a) Levy
 - (b) Monopoly procurement
 - (c) Voluntary procurement

10. Would you recommend cordoning of surplus areas?
11. (a) Would you recommend the establishment of warehouses which can advance credit against storage of foodgrains, the farmer being free to take back his grain when needed? If so, would you recommend that they be established through Govt., special corporations, union panchayats or cooperative agencies?
- (b) Would you recommend that such a system should operate in addition to Govt. or private trade agencies for purchase?
12. (a) Would you recommend the establishment of an overall statutory organisation for supervising and developing foodgrain reserves, storage and policies?
- (b) Would you recommend that such an organisation should arrange purchase directly or through private trade at a declared floor price and use its reserves for price stabilisation?
13. (a) Would you recommend establishment of permanent revolving reserves of foodgrains? If so, what would be your suggestions for their size for wheat and rice?
- (b) How would you replenish these reserves?
14. Would you consider that such foodgrain policies should be limited to rice and wheat only? Or would you extend this to other food crops? If so, which of them?
15. (a) If you are a consumer only would you prefer to get atta rather than wheat?
- (b) Do you find the present sale price of wheat and rice reasonable? If not what price would you suggest? Please give reasons.
- (c) Would you suggest special arrangements for supply of maize, bajra and sorghum in urban areas?
16. Do you think there will be less pressure on wheat or rice if chickens, fish and vegetables are available at a cheaper price? If so what prices would you suggest for them?
17. Would you eat more potatoes or sweet potatoes if their price is reasonable? Can you suggest a price?
18. Do you consider the present storage for foodgrains adequate? If not, what are your suggestions?

II. Statutory Bodies

19. Do you think agricultural development particularly food production will be speeded up, if statutory authorities on the lines of PIDC, WAPDA, or TDA were established to deal with the subject? Please give reasons. If so, what subjects should be handled by them?
20. (a) Do you think nation-wide activities such as fertilizer distribution, seed supply, plant protection, supply of implements and equipment, etc. should also be taken up by these bodies besides specific regional or zonal projects? Please give reasons.
- (b) If the answer to question (a) is yes, do you think it will be necessary for these bodies to take over agricultural extension work as well in

order to produce maximum results in the shortest possible time?
Please give reasons.

(c) If the answer to question (b) is yes, what should be the relationship of these bodies with the departments of Agriculture, Animal Husbandry, Fisheries, Village-AID, etc., and what should be the fields of departmental activities? How should their work be coordinated? Please give detailed reasons.

21. Should there be one such body for the whole of Pakistan or one for each of the two provinces or separate area-wise and subject-wise authorities or there should be a national or two provincial organisations with sub-organisations under them to deal with specific territorial or subject-wise projects? Please give reasons.
22. What are your suggestions about the constitution of such an ^{organisation} organisation? How would you finance its operations?
23. Should it or should it not have any controlling voice over the organisations operating in the agricultural field and should it be given any authority over the farmers to ensure scientific land management and use? Please give details.

III. Agricultural Extension

24. To whom do you look for advice and help in agricultural matters?
25. What help have you received from the Agriculture Department, say, during the last one year? Please give particulars.
26. Is the extension service of the Agriculture Department adequate and effective to meet the diverse needs of the farmers and to induce them in adopting improved agricultural methods? If not, state its defects and suggest improvements.
27. Does the extension agent (Union Agricultural Assistant or Mukaddam) of your area keep regular contact with the people of your area personally or through meetings, film shows, demonstrations, exhibitions etc.?
28. Is this contact sufficient and effective? If not suggest improvements.
29. Have you any difficulty in getting your requirement of seeds and fertilizers from the Govt. store? If so, suggest remedies.
30. Have demonstration plots been established in your area and if so have you visited them? Has this helped you and other people of the area in increasing production? If not, what are the causes?
31. Has there been any crop competition in your area? If so, has this generated sufficient enthusiasm among the people for increasing production through better methods? How far do you think they are useful?
32. Have exhibitions, shows etc. been organised in your area? Are they useful?
33. Have your crops been attacked by pests and diseases? If so, did you ask for help and if so was it readily available and effective?
34. Have your livestock suffered from diseases? If so, did you receive adequate and effective help from the departments.

35. Has any preventive measure been taken by the department in your area against cattle diseases? What are they?
36. Do you use any improved implement recommended by the department? What are they and what is your opinion about their availability and usefulness?
37. Are you familiar with the Japanese method of rice cultivation? Have you practised it yourself or seen it practised by others? What is your opinion about this method?

IV. Plant Protection

38. Are you aware of the existence of a Plant Protection Service in the country?
39. Have you any direct knowledge or experience of the organisation and its operations?
40. Do you consider the existing plant protection service adequate for meeting the needs of the country? If not, please give your own views on the subject.
41. What in your opinion should be the rôle and responsibility of the Central Government, Provincial Government and the farmers in successful plant protection operations?
42. Do you think it would be an advantage if plant protection staff is provided upto Sub-Division or Tehsil level or if plant protection work is left to the agricultural extension staff?
43. Would you like to do your own pest control except in case of epidemics, if equipments and pesticides are made available through private trade or would you like private organisations to do this for you on payment? In case Govt. is to undertake this work would you agree to meet the whole or part of the cost through a cess?
44. Have you received any help from aerial pest control unit? If so, did you find it useful?
45. What are your views regarding:
 - (a) formulation and manufacture of pesticides in the country;
 - (b) manufacture of spraying equipments?
46. What are your suggestions for placing these industries on a sound footing?
47. Do you have any reliable information about the economics of plant protection operations? If so, please give particulars.

V. Manures and Fertilizers

48. Do you believe in the use of artificial fertilizers?
49. If so, are there any difficulties in your obtaining it? Would you use more artificial fertilizers if it is given to you on credit? If so on what crops?
50. What increased yield did you get by the use of these fertilizers? Please give results obtained with different fertilizers on different crops.

51. Has there been any adverse effect of any of these fertilizers on yield of crops or on the soil? Please give particulars.
52. What are your suggestions for extending the use of artificial fertilizers?
53. Would you recommend distribution of artificial fertilizers through private trade?
54. Would you recommend introducing an element of compulsion in the use of fertilizers with a view to achieving higher production targets?
55. Do you use farmyard manures on a regular basis? If so, what steps would you suggest to increase its supply and use?
56. How do you preserve farmyard manure? Do you add cattle urine to it?
57. Do you practise green manuring? If so, to what extent?
58. What difficulties do you find in extending the use of green manures?
59. Do you use bone meal, oil seed cakes, and fish meal as manures? If so, have the results been satisfactory? Would you recommend their more general use?
60. Have you been using berseem, mung, masur, etc. as fertilising crop? If so, do you do this on a rotational basis?
61. Do you recommend the use of any other manures or fertilizers?

VI. Seeds

62. Have you been using improved seeds? If so, for how long and with what results?
63. What are the improved varieties of seeds of principal crops you are using?
64. How do you get your seed supply and how often you replace your seed stock?
65. Do you think that the programme of the Agriculture Department for supply, storage and distribution of seeds is adequate and satisfactory and meets your requirements? Would you suggest any improvement in this field?
66. Would you suggest that seed multiplication and seed distribution be taken over by private enterprise with certification control by Government?
67. What should be the purchase and sale price of seeds vis-a-vis the market price?

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QUESTIONNAIRE FOR DEPARTMENTAL OFFICERS •

I. Food Procurement

1. Do you consider the present price of rice and wheat reasonable from the points of view of the consumers and the producers? Do you consider that there is any relationship between the world price and C.I. F. price? Do you think such a relationship is necessary?
2. Do you think it is necessary to provide a higher price for wheat and rice to provide incentives to the growers? If so, what principles should be taken into consideration in fixing the price? What will be your suggestion for a reasonable incentive price?
3. Do you think in East Pakistan there should be any relationship between the price of rice and that of jute? If so, what?
4. Do you think in West Pakistan there should be any relationship between the price of wheat and that of coarse foodgrains (both rabi and kharif) or with the price of cotton and sugarcane? Would a higher price of wheat increase the acreage under rabi and other kharif crops?
5. Is wheat yield falling or increasing during the last 5 years? If so, what are the reasons? Do you think there is more emphasis on the production of coarse foodgrains and how are these foodgrains being utilised?
6. What other incentives do you suggest for increasing production of wheat and rice? Would you suggest a change in the taxation structure by way of incentive?
7. Would you recommend the continuation of the system of curbs on hoarding by fixing the maximum stocks which a person can hold?
8. Would you recommend monopoly procurement whenever Govt. makes foodgrains purchase? Should it be accomplished by cordoning?
9. Would you suggest voluntary procurement in years of high production? Do you think monopoly procurement is the best method of maximising procurement even in such years?
10. Do you think that in years of short production monopoly procurement and levy reduce local stocks in villages necessitating subsequent distribution by Govt.?
11. Do you think warehousing is necessary? Do you think this arrangement will help to improve the local supply position in villages?
12. Would you recommend establishment of grain reserves? If so, what should be the size of such reserves and how should they revolve?
13. Would you recommend the continued purchase of rice and wheat by Govt. or would you be in favour of handing this over to private trade with necessary supervisory curb and release of Govt. stocks and reserves for price stabilisation? Would you in this case think that a free market price of foodgrains would keep the prices at an incentive level?
14. (a) Would you recommend the establishment of an overall statutory body for supervising and developing foodgrain reserves, storage and policies?

(b) Would you recommend that such an organisation should arrange purchase directly or through private trade at a declared floor price and use its reserves for price stabilisation?

15. Do you think that Govt. procurement policies should be limited to only rice and wheat or it should be extended to other food crops? If they should be extended to others which are the crops you would recommend?
16. Do you think an increased extraction of maida, suji and rawa would enable Govt. to subsidise the price of atta and thus enable the farmers to get a higher incentive price?
17. Do you think that special arrangement for supply of maize, bajra and sorghum in urban areas would relieve the pressure on wheat?
18. Do you think the habits of the people can be radically changed so as to make them eat more potatoes & sweet potatoes? If so, what measures would you suggest to do this? What will be the reasonable price of potatoes to enable such a programme to work?
19. (a) If you are a consumer only would you prefer to get atta rather than wheat?
(b) Do you think the present sale price of wheat and rice reasonable? If not what price would you suggest? Please give reasons.

II. Statutory Bodies

20. Do you think agricultural development particularly food production will be speeded up, if statutory authorities on the lines of PIDC, WAPDA or TDA were established to deal with the subject? Please give reasons. If so, what subjects should be handled by them?
21. (a) Do you think nationwide activities such as fertilizer distribution, seed supply, plant protection, supply of implements and equipment, etc. should also be taken up by these bodies besides specific regional or zonal projects? Please give reasons.
(b) If the answer to question (a) is yes, do you think it will be necessary for these bodies to take over agricultural extension work as well in order to produce maximum results in the shortest possible time?
(c) If the answer to question (b) is yes what should be the relationship of these bodies with the departments of Agriculture, Animal Husbandry, Fisheries, Cooperation, Village-AID, etc. and what should be the fields of departmental activities? How should their work be coordinated? Please give detailed reasons.
22. Should there be one such body for the whole of Pakistan or one for each of the two provinces or separate area-wise and subject-wise authorities or there should be a national or two provincial organisations/under them to deal with specific territorial or subjectwise projects? Please give reasons.
23. What are your suggestions about the constitution of such an organisation or organisations? How would you finance its operations?
24. Should it or should it not have any controlling voice over the organisations operating in the agricultural field and should it be given any authority over the farmers to ensure more scientific land management and use? Please give details.

III. Agricultural Extension

25. Have you adequate staff, materials and equipment to meet the needs of farmers in your area? If not what are your recommendations?
26. Do you consider that your present staff have the necessary background and training to provide the required leadership to the rural masses for agricultural development? If not, what are your suggestions for improvement?
27. Do you receive adequate information to pass on to farmers for agricultural improvement? In what form do you receive them and how do you disseminate them? Have you any suggestion for improvement?
28. What are your principal means of communication with the masses and how far they are effective? Can you suggest any improvement?
29. What are, in your opinion, the main causes for the slow adoption of improved practices by the farmers and how can they be removed quickly? Would you introduce an element of compulsion in implementing Govt. projected opinion for increasing agricultural production? If so, what are your suggestions?

IV. Plant Protection

30. What is the plant protection organisation in your jurisdiction? State clearly the responsibilities of the plant protection staff, extension staff and farmers.
31. What are the relative functions of the plant protection staff, extension staff and the farmers in the field of plant protection in your area?
32. Do you consider the existing organisation in this field adequate and satisfactory? If not, suggest improvements.
33. Do you have adequate facilities and resources for effective control of outbreaks in your area? If not what are the difficulties?
34. How do you obtain information about outbreaks of pests and diseases in distant places in your jurisdiction?
35. How would you improve information services in this field?
36. (a) Storage of pesticides and equipment.
(b) Repair of equipment.
(c) Quick transport of materials and equipments to infected areas.
37. Is the present staff engaged in plant protection properly trained? If not, what are your suggestions? Do you have sufficient facilities for the proper identification of insect pests and diseases?
38. What are your views about aerial pest control v/s control by ground machinery? How far should the aerial pest control work supplement ground control work?
39. Are plant protection measures economic? Please give particulars.
40. Do you think that there is any demand from farmers for purchasing pesticides and spraying equipment? If so, to what extent?
41. Do you find the farmers whose crops are affected are keen to utilise plant protection services?

V. Manures and Fertilizers

42. Have you been able to sell all the fertilizers supplied to you? If not, why not?
43. Was there any unsatisfied demand in your area? If so what steps did you take to meet it?
44. What steps did you take to extend the demand?
45. What is your estimate of optimum needs of fertilizers of your area? Please give the basis of your estimation.
46. Has there been any demand or need for fertilizers other than nitrogenous fertilizers in your area?
47. What have you been doing in educating the farmers about proper use of fertilizers in your area (kind, dose, time and manner of application)?
48. Is storage arrangement for fertilizers adequate and well distributed in your area? If not, give your detailed recommendations. Add your comments on transportation, if any.
49. Is the system of distribution through Govt. depots and/or private agents working well? Do you suggest any change in the system?
50. Would you recommend distribution of fertilizer by private trade?
51. What suggestions have you for extending the use of fertilizers?
52. What is the normal pattern of use of fertilizers and other manures in different crops in your area? How can its use be increased on food crops?
53. What is the estimated increase in yield of different crops in your area by use of different fertilizers?
54. Has any adverse effect of fertilizer come to your notice?
55. What is the most popular combination of manures and fertilizers in your area?
56. Do you think that sale on credit will extend use of fertilizer in general and on food crops in particular at the present price of commodities?
57. Do you recommend the continuance of subsidy and, if so, for how long? Please give reasons.
58. (a) Do you think it is necessary to saturate the demand for cash crops before its use can be extended to food crops?
(b) Do you think an increase in the price of food crops would increase the use of fertilizers on these crops?
59. What is the price which farmers would be willing to pay per maund of fertilizer?
60. What should be the points of distribution of fertilizer with a view to making it easily accessible to the farmers?
61. (a) What is the proportion of cow dung which is not used as manure?
(b) How would you reduce use of cow dung as fuel?

62. (a) Is there any demand in your area for other manures like oil seed-, cakes, bone meal, etc.? How do you meet the demand?

(b) How can their use be extended?

63. (a) What are your views about the Japanese method of rice cultivation? If it is useful how would you extend its use?

(b) Is soil fertility survey scheme operating in your area? If so, do you find it useful? Have you any suggestions about it?

64. Why ^{is} the green manuring now generally in use? What are the difficulties? Have you any suggestions for extending its use?

65. Are legume crops being used as soil fertilizers? How would you extend their use? What solutions would you suggest?

VI. Seeds

66. Have you any suggestion about improved varieties of seeds for which a special campaign for distribution may be organised?

67. What are the difficulties in the introduction of improved seeds to the farmers? Have you any suggestion for a better liaison between research stations and the farmers in this regard?

68. What are your views about the present facilities for plant breeding of nucleus seed, and what are your suggestions for improvement? Please answer cropwise.

69. What difficulties have you encountered in large scale multiplication of improved seeds through -

- (a) Government farms,
- (b) Registered growers, and
- (c) Demonstration farms?

How can these be overcome?

70. Have you been receiving adequate supplies of improved seeds of various crops for distribution? Do you think existing demand is heavier than the supplies?

71. What is the system of distribution of improved seed in your area? What are the difficulties of this system? What are your suggestions for improvement?

72. Have you adequate facilities for seed storage? If not, what are your suggestions for improvement?

73. What steps would you suggest to ensure that seed is available at the proper time for sowing?

APPENDIX IV

INTERIM REPORT

CHAPTER I

Introduction

1. The Food & Agriculture Commission was appointed by the Government of Pakistan by Notification No.F.1-64/59-Estt., dated 11-7-1959*. It was inaugurated on 16-7-59. The two foreign members, Dr. A.G. Black and Mr. A. Gaitskell were not, however, expected until later and they actually joined on 27-9-59 and 2-10-59 respectively. The Commission, therefore, could only do preliminary work before their arrival. The scope of work and the lines of enquiry were finalised in the meeting of the Commission held from 12th to 16th October 1959. It is expected that the enquiry phase of the Commission's work will be over by about the middle of April, 1960, and the consideration and discussion stage will start after that.

2. The Minister and the Ministry of Food & Agriculture, through separate letters**, asked the Commission to make interim reports on the following subjects:-

- A. The suitability of establishing one or more Agricultural Development Corporations to increase agricultural production;
- B. Food procurement policies;
- C. The report of the Central Reorganisation Committee on the proposed future set-up of the Ministry of Food & Agriculture; and
- D. The decision of the Economic Committee of the Cabinet that the Commission should report on steps necessary for increasing the production of cotton from the present level of 1.7 million bales to a level of 2.5 million bales by 1965 and asked the Commission to make interim suggestions for the steps to be taken now.

3. The Commission have considered these subjects and discussed them with the persons and organisations concerned. There are many problems involved in this which are so intimately linked with the general theme of the Commission's main report that an expression of opinion now would be premature. The Interim Report which follows is confined, therefore, to those aspects upon which the Commission feels able to express an opinion now.

* See Appendix I (A & B)

** See Appendix II (A, B, C & D)

4. Pakistan agriculture presents a very diverse picture. There are large tracts of land where the actual operator is no more than a labourer. There are others where he is a tenant at the mercy of the landlords. In some he is a tenant with well-defined legal rights and in yet others, he is a peasant proprietor with definite traditions. The landholding community in many cases has a position in the rural society which transcends the field of agriculture. A tribal or a semi-tribal set-up prevails in a significant sector.

5. In spite of this variety, there is a pattern of agricultural uniformity at least in each province. In East Pakistan, the agricultural economy is based primarily on rice and jute and most of the land that can be used by the farmer with his existing means has been brought under the plough. In addition each farmer supplements his income and meets some of his own requirements by growing a few fruit trees and keeping a few chickens and goats around his house. He may also have one or two bamboo clumps which help him to maintain his dwelling. The sowing times, the application of manures, weeding and other operations are based on the normal climatic conditions and are set by tradition based on experience. There is very little winter cropping because of lack of rains and irrigation facilities during the dry season. In the drier climate of West Pakistan, the principle of meeting the local and personal needs again governs the pattern of agriculture. Here, however, rotational cropping based on the need for conserving water and maintaining the fertility of the soil is more in evidence. The cropping pattern is also much more diverse, the main crop being wheat, cotton, rice, maize, baira, sorghum and sugarcane. Horticulture is more extensively practised and vegetables farming is evident around the cities. More attention is given to the maintenance of cattle than in the East and a considerable part of the population is engaged on cattle production on a tribal range basis. Both provinces have farmers who carry out agriculture on the traditional pattern excellently.

6. The experience behind these traditional patterns within both provinces creates a psychological build-up which makes a break from the past

a difficult proposition. This difficulty is increased by the ignorance of the farming population, the paucity of communications and the break-up of the traditional community life, which had created the traditions on which the present agriculture is built. In this situation, the rapid increase in population has had a devastating effect. The complicated picture of the sub-division and fragmentation of holdings, the shrinkage of the means of the small farmer and the increasing loss of initiative are the evident results of this impact. West Pakistan has the largest irrigation system in the world, but unsupported as it is by any proper drainage, the twin disasters of salinity and water-logging have created very serious problems. In the recent past, the difficulties of the country have been increased by unusual weather hazards bringing in their wake a higher incidence of disease and destruction by floods and drought.

7. Modern science has placed at the disposal of men new methods of increasing production. The implementation of these methods requires a widespread diffusion of knowledge to the farmer, a larger availability of improved seeds, fertilisers, pesticides, implements, motive power and means of irrigation, and a considerable investment of capital. It is necessary, therefore, that any attempt at increasing agricultural production on a large scale must provide for a spread of knowledge, availability of supplies, availability of capital and credit and the setting up of organisations to bring this about. In addition price levels have to be established and marketing reorganised if prices are to be obtained which will bring a sufficient return to the farmer to make it worth his while to increase production of crops which fit into the needs of national economy. Modern methods also envisage a highly skilled farm management knowledge and organisation at the farm level to enable better use to be made of these resources.

8. The Food & Agriculture Commission considers that its principal task is to find methods and organisations, which will spread the new knowledge, will arrange the provision of supplies and credit to the farmer, and will organise him to his better advantage. It feels that in agriculture, the

problem is less that of directly implementing a policy than one of persuading the farmer to implement such a policy and of providing him with means to do so. It envisages the setting up of the necessary organisations for educating the farmer in the new methods and advances in science, for demonstrating to him that these methods would increase his output, for enabling him to get necessary resources and implements for doing so, and for so organising him that he can manage his farm and market his produce to better advantage. These aims are more radical than previous approaches on the subject particularly in regard to the organisation of a more satisfactory base for farming as opposed to more provision of plans from the top. The Commission is convinced that policies must be so framed that they provide a solution to the problems of the farmer, win his confidence for a large change-over of methods from the traditional agriculture to more scientific system and secure for him an increase of his income. They feel that this approach will tie up the farmer's interests with national policies and will thus raise the national production at the same time as raising the farmer's income and standards of living.

9. The ultimate problem of agricultural production can only be solved by bringing the farmers together for farm management and marketing, and for cooperative arrangements for providing credit, even to men of small means, through a concept of lending on the basis of productive capacity rather than on the present basis of credit-worthiness. These problems of the farmers will have to be handled at the village level and a main objective of national planning will be the creation of an atmosphere for this purpose. In order to do so many independent, and often mutually exclusive organisations that exist, will have to be brought into one coordinated system.

Thorough coverage of all means is bound to take time but to obtain early results, the combined efforts of everybody who has anything to do with the rural population will have to be mobilised for emphasis on a few definite objectives in a limited field. For this immediate purpose objectives which can be dealt with at a national level and can give results in a short span of

time, while creating a climate for further advance, should be selected.

10. Pending further examination our tentative view is that a solution of the problem of agricultural production should be sought in three parallel approaches.

- i) At the immediate level, a concerted campaign in which all departments and organisations must cooperate to persuade the farmer to use certain methods and to ensure that means for pursuing these methods are available to him.
- ii) The regrouping of departments and the establishment of suitable organisations so that research, extension, credit and supplies are dealt with so as to reach the farmers quickly, smoothly and conveniently.
- iii) The organising of farmers for farm management, capital investment and marketing.

11. These approaches are intended to increase agricultural production for the farmer and for the national interests. The first approach emphasises the use of existing organisations. The second involves an overhaul of the whole governmental set-up in this field without a major change in the pattern of farming. The third is for the specific purpose of making changes in that pattern. There is no reason why a start should not be made in all of them at the same time. But whereas the few objectives of the first approach can be tackled immediately and on a wide scale, the coordination of the many objectives in the other two approaches is bound to demand more time and be limited initially to selective application. The same factors affect our own deliberations and we are studying the best methods of approach including the question of where and when a semi-independent authority may be able to give better results, a subject which can only be dealt with very generally in chapter III below.

12. In this Interim Report, we are dealing only with certain measures that can be adopted for the next summer crop in West Pakistan and Aman crop in East Pakistan in accordance with the first approach.

13. We feel that measures which can immediately result in an increase of production are the greater use of chemical fertilisers, more plant protection measures and more readily available assistance through government credit. We have excluded the use of improved seed from these

proposals as the cotton seed position this year is not satisfactory (and although we have some recommendations to make it is merely from the point of view of filling a gap rather than suggesting improvements) and the availability of improved seeds in other crops is very small compared to the needs. We have, therefore, excluded seed from consideration for the time being but will revert to the subject in our main report. We propose that efforts be concentrated on the cotton, rice and maize crops in West Pakistan and on rice only in East Pakistan.

14. We recommend that the use of fertilisers be stepped up between two and three fold in West Pakistan and about three fold in East Pakistan. After consideration of the supply position and the experimental work done so far, we propose to concentrate on nitrogenous fertilisers in West Pakistan and on nitrogenous and phosphatic fertilisers in East Pakistan. We shall deal with the need for a more balanced fertiliser in our subsequent report.

15. We also propose the application of the plant protection campaigns on a much wider scale and also the concentration on limited areas for an all out effort to eradicate pests and diseases.

16. Our proposals include additional steps to be taken to increase cotton production during the next crop. Other items could be included in the proposals but we feel that concentration on a few objectives is likely to bring the best results. Proposals for similar campaigns on other crops will be made in our main report or in our subsequent interim reports.

17. The second chapter of this report deals with the problems concerning food procurement policies. The third with those organisational matters which have been referred to us together with brief note concerning certain aspects of the newly established National Development Organisation. The fourth chapter relates to a programme for a concentrated production campaign during the next summer crop.

18. We have tried to go into details wherever necessary and have indicated the financial implications of the proposals. In certain cases, it

was not possible to tie up all the ends, while in others, we decided that it would unnecessarily burden this report to list all the details. If government accepts the proposals, we have made, we will be glad to assist the organisations concerned with the subject in the preparation of detailed action programmes.

CHAPTER II

FOOD PROCUREMENT POLICIES

19. The Pakistan Cabinet took the following decisions on 10-10-59:

- (i) that all restrictions on the movement of wheat within West Pakistan including Karachi, except in the five miles border belt, should be withdrawn and the trade allowed to function freely;
- (ii) that a reserve of 5 lakh tons of wheat should be maintained by government at all times. The ICA would supply stocks under PL-480, Title I, to meet the wheat deficit for a period of three years and to help maintain a standing reserve of 5 lakh tons'
- (iii) that the floor price of wheat should be fixed at Rs. 13-8-0 per maund (without bag). Government should enter the market for procurement of wheat at the floor price, if offered;
- (iv) that government should have control over the rolling flour mills. In particular, government should have the power to fix the percentage of wheat to be taken and milled by the flour mills from government stocks along with the indigenous wheat purchased by them. Government should also have the power to prescribe the percentage of flour extraction, and the specifications of atta to be sold. Government should also have the statutory power to control the wholesale ex-mill rate of atta from time to time;
- (v) that the Central Government should ask the State Bank of Pakistan to issue directive to commercial banks that they should give only short term credits to roller flour mills and other big traders in foodgrains;
- (vi) that any person should be free to purchase wheat from government godowns at the fixed price of Rs. 15-8-0 per maund, subject to the maximum and minimum quantities to be laid down by government;
- (vii) that Provincial Government should set up immediately an organisation to collect marketing intelligence in respect of major food-grains.

Cabinet further decided:

- (viii) that the government should keep a strict watch on prices and availability of wheat in the country. It should be ensured that in case of necessity the government could re-impose controls on prices and distribution without much delay or difficulty;
- (ix) that the registration of grain dealers need not be enforced by Law. The Government of West Pakistan should, however, ensure that their laws provide for regulating the marketing of wheat;
- (x) that the ceiling price of wheat should not be announced. However, when in the opinion of the government, the prices of wheat are tending to go beyond a fair and reasonable level, the government should release stocks at the wholesale rate of Rs. 15-8-0 per maund (inclusive of bag);
- (xi) that the supply of wheat to the Armed Forces should continue to be arranged by the Ministry of Food & Agriculture;
- (xii) that the question of supply of wheat to Azad Kashmir should be discussed by the Ministry of Food & Agriculture with the President of Azad Kashmir Government.
- (xiii) that in respect of the Special Areas, the Government of West Pakistan may fix specific prices in view of the high cost of

20. The government had decided earlier to procure Sind Kangni and Joshi rice on the same basis as in the past through a monopoly procurement system so that this cheap rice could be made available for distribution in East Pakistan. At the same time, they decided that the surplus of Punjab Basmati, Parmal and Begami rice should be available only for export. This was to be achieved through a control on movement. Nobody was permitted to move this type of rice out of the surplus area, in a quantity of more than 5 seers per head, except under a permit to move it to Karachi. The person who brought this rice into Karachi was to use it only for export outside Pakistan. This step was taken to increase foreign exchange earnings.

21. In East Pakistan, the food needs were being met through local production and import both from West Pakistan and from foreign countries. The distribution was controlled through a system of statutory rationing in the urban area and through modified rationing in the rural areas. Under the system of statutory rationing, the government undertook to provide rice for everybody in these urban areas at a specified rate while under modified rationing, supplies, depending on the position of reserves and procurement, were first to be made to people with very low incomes (category 'A'), then to the population with somewhat higher incomes (category 'B') and finally to the rest of the people (category 'C'), in areas where shortage and high prices appeared.

22. With the prospects of a good crop during the present aman season, statutory rationing has been withdrawn from all towns, except Dacca, Chittagong and Narayanganj, and modified rationing is also being discontinued for the time being. It is intended to bring in statutory and modified rationing only if the prices rise sharply or shortages develop.

23. These Cabinet decisions represent a major change in the food policies of government. The reason behind this change is a wish to encourage a freer trade in foodgrains and to get a period of time during which foodgrains trade would develop and government would take steps to increase production so that import would be reduced.

24. It is gratifying to note that the International Cooperation Administration of the United States has agreed to provide wheat in order to help Pakistan to maintain a reserve stock of 500,000 tons of wheat. It is intended to maintain this reserve over a period of three years by replacing the take off from it by purchases, additional aid from ICA and assistance under the Colombo Plan. With respect to rice, an agreement has been entered into with the Government of Burma by which the Government of Pakistan will purchase each year 200,000 tons of rice for East Pakistan during the next 3 years with an option to purchase another 100,000 annually if the need arises. The Government of Burma have also agreed to give another 100,000 tons in payment of old dues at the rate of 40,000 tons this year and 30,000 tons each in the following two years. Finally, the expected procurement of between 150,000 to 200,000 tons of Sind Joshi and Kangni rice is to be made for despatch to East Pakistan. It is hoped that confidence in food policies of government will be established through the physical presence of these stocks which should also eliminate chances of panicky rises in prices.

25. The Government of Pakistan has in the past attempted to provide food at a minimum level and at reasonable prices to the people. When shortages developed, hurried attempts were made to procure wheat and rice; this usually had to be done at a fairly high cost and a high percentage of limited foreign exchange was used to meet this obligation. On the other hand, the government undertook to procure rice and wheat at declared floor prices. Such floor prices have been rising from year to year.

26. It is unnecessary to go into the history of our procurement policies but there is no doubt that frequent changes in policies, the steep rise in prices in some areas and certain trade practices have contributed to the building up of an atmosphere of uncertainty both in the producing and the consuming population. As a result, a slight panic in one area is apt to be reflected in the whole country and prices tend to rise everywhere. These uncertainties have undermined the people's confidence in the ability of the government to control the situation and maintain stable prices. A curious

feature of the situation has been that in some years, even when the production was good the prices rose even at the time when the crop was coming into the market.

27. The Commission has had the advantage of studying the experience in India recently as outlined in the Mehta Report and, although the case is of course not entirely parallel, certain aspects of it would appear to be relevant to Pakistan. Among the causes contributing to rise in prices, the following items were listed by the Mehta Committee as particularly important:-

- (i) A large availability of money in circulation, through increased economic development, deficit financing, extensive credit and rise in incomes, led to inflationary tendencies.
- (ii) The increase in population and the shift of population from rural to urban areas resulted in higher pressure on wheat and rice as against other foodgrains which are consumed in larger quantities in rural areas.
- (iii) The result of panic, whenever a shortage appeared in any foodgrain in any part of the country, was to induce the farmers to retain for a slightly longer period their reserves of foodgrains (thus reducing the marketable surpluses), either with a view to obtaining higher prices later in the season.
- (iv) The production of food supplies in India was of a marginal nature. The Indian agricultural economy had no chance of reaching self-sufficiency in the foreseeable future in spite of some increase in the production, while the supplies from outside had to be kept at the minimum level against the possibilities of burdening surpluses.

28. These causes apply substantially to Pakistan and there is no doubt that they are the main factors which have made food administration so difficult. The margin between self-sufficiency and deficit here is such that a reasonable rise in production could wipe it out. But until a stage of a reliable food surplus is reached, the physical existence of sufficient reserves widely publicised and suitably located, is absolutely necessary to allay panic. This is all the more important since the factors outlined above would tend to go on putting increasing pressure on wheat and rice. Another factor which influences the situation is that if a farmer or a consumer is in a position to get a higher quantity of foodgrain, there is a tendency to eat more. The same thing happens in the case of an increase in income.

29. One conclusion to be drawn from all these considerations is that,

permanent, not a temporary, organisation must be envisaged to keep watch on the whole food situation and to ensure that adequate supplies are available both in reserve and throughout the distribution pipe line. This

will be absolutely necessary to stabilise prices and to take action to anticipate any increasing demands so that any tendency to panic may be averted.

30. The two tables in Appendix III give the position of production and consumption, balance and imports of wheat in the province of West Pakistan as well as for the country as a whole. On the estimates made available to us, the Central Government's present commitment amounts to the supply of 250,000 tons for Karachi, 100,000 tons for Defence Services and Azad Kashmir and 150,000 tons for East Pakistan, giving a total of 500,000 tons per annum. The import requirements of West Pakistan Government have differed from year to year and while they are to a certain extent correlated to the procurement made by them, they do not present a regular pattern. The West Pakistan Government, however, estimate that in the year 1960-61, if the policy of the previous year had been continued they would have had to distribute 300,000 tons of imported wheat in addition to whatever they procured locally, which on the present crop prospects would probably have been expected to be higher than last year. While it is now intended that trade should handle the internal purchases, this means that the import requirements of the country for consumption even under the new policy will amount to 800,000 tons. In addition to this, it is intended to maintain a reserve of 500,000 tons. The total requirements, therefore, will be 1.3 million tons. (The West Pakistan Government's estimates include provision for the additional requirements of 100,000 tons to meet the needs of the annual increase in population).

31. We understand that there has been an increase of 350,000 acres under the present wheat crop. The January rains have been satisfactory, and although the hazards of rust and the failure of rains in February and March are present, the prospects generally are satisfactory. The availability of wheat, therefore, at the time of next harvest, is likely to be slightly

32. Under various agreements for the import of wheat, the supplies arriving since December last are as follows: (a) Canada is supplying about 64,000 tons under the Colombo Plan, out of which 46,578 tons arrived in December, 9,200 tons in January and the rest is expected in February. (b) Cash purchases were made from Australia to the extent of 37,500 tons, out of which 11,100 arrived in January, 11,000 tons have arrived early in February, and the balance is also expected to arrive during this month. (c) Two agreements have been signed with the U.S. Government for the supply of 400,000 and 350,000 tons of wheat respectively to be shipped by the end of June 1960. Out of this 100,000 tons is to be supplied to East Pakistan. The shipping to East Pakistan has not started but is expected to take place soon. Out of the balance of U.S. shipments 33,697 tons arrived in December 1959, 50,589 tons in January 1960, 30,000 tons in February 1960. Another 69,000 tons has been despatched and is expected to be received during February. The arrival of 100,000 tons each is programmed for March and April. The balance of 266,000 tons under these agreements is to arrive in the months from May onwards. (d) In addition another 11,000 tons is to come from Australia under the Colombo Plan. The shipping dates for this supply have yet not been finalised, but it is expected by the end of June.*

33. The new policy is scheduled to start on the 1st of May 1960, although restrictions on the movement and price control are to be removed from 1st of April. The stock position and estimated imports and estimated consumption during the period December 1959 to 30th April 1960 is given below:-

		<u>Imports</u>	<u>Off-take</u>
Balance on 1-12-1959	Tons	205,126	
December 1959		80,275	88,200
January 1960		70,889	94,200
February 1960		133,622	104,200
March 1960		100,000	104,200
April 1960		100,714	94,200
		<u>690,626</u>	<u>485,000</u>

*See Appendix IV.

34. This table indicates that the stocks in hand on the 1st of May will be about 200,000 tons, more or less depending upon off-take during the winter months. The new policy will, therefore, start with a reserve of 200,000 tons in the Western Province as against a contemplated reserve of 500,000 tons. One of the most important considerations on which the introduction of the new policy was based will not, therefore, be present. Out of the reserve of 500,000 tons, 75,000 tons was to be maintained in East Pakistan. This means, therefore, that the reserve in West Pakistan is short by about 225,000 tons. East Pakistan's total requirement of wheat has been calculated at 150,000 tons per annum. Of this supplies have been arranged for 100,000 tons and it is expected that the balance will come from further arrangements. In any case, as the rice crop in East Pakistan is good, there will be no immediate pressure from this source on the stocks of wheat.

35. The question now arises as to whether it is advisable to start the new policy on 1st of May. During May, June and July, the major part of the marketable surplus of the wheat crop comes to the market and it is believed that in those 3 months the off-take outside the commitment of the Central Government will be negligible. During these months government should be building up reserves of imported wheat. The critical period is from now until the end of April. If during this period there should arise any lack of confidence in the ability of government to maintain supplies and control any unreasonable rise in prices, the situation would be very hazardous.

36. In these circumstances, we recommend that the date of 1st of May 1960, for the time being, be adhered to for the introduction of the policy. But, if the situation deteriorates in the coming months, because the crop turns out to be below expectation, or because prices rise and cause a greater draw-down of stocks than estimated, or because the arrival of imports falls below the estimates, then postponement may be essential. We recommend that the situation be thoroughly reviewed at the end of March and that the policy should not be introduced on 1st May, unless the physical reserves

and current production will cover all needs. If, however, these apprehensions prove to be unfounded, it is important that the announced policy should not be changed, so that there is no further jolt to the establishment of confidence in the food administration.

37. As a matter of precaution, it may be advisable to be discreet in the use of reserves and in the fixation of the upper price limit during the months of May, June and July when the market supplies should be ample. Reserves should be used only in case of real need. This is important, as it will allow government's reserves to be built up and would stimulate trade in establishing itself.

38. As a matter of further precaution, we feel that the pressure of the Karachi flour mills on the wheat market upcountry should be reduced in the first year or at least for the earlier few months by freely issuing stocks out of reserves to these flour mills whenever requested. This may assist in keeping down prices in Karachi as well as upcountry. The Karachi mills have a capacity of about 20,000 tons of wheat per month, thus in the early 3 months, the total off-take will be about 60,000 tons. This supplying of mills in Karachi will have the added advantage of reducing the pressure on the supply line between Karachi and West Pakistan. To counter-balance this pressure on the reserves, we recommend that in the first 3 months the upcountry mills be allowed freely to buy in the market instead of receiving a part or the whole of their requirements from the reserves.

39. We are informed that the programme of imports has been kept at a maximum level of 100,000 tons per month, to match the capacity of the port and railway facilities to handle the wheat. We understand, however, that at one stage upto 150,000 tons have been dealt with in a month and we would urge an immediate review of the matter with the object of stepping up imports to the highest possible level until the reserves are built up. We attach the greatest importance to the subsequent maintenance of the reserves at full supply level at all times. We consider these matters of urgent importance and have indicated our views to the Secretary of the Ministry of Food & Agriculture.

40. We suggest that the present facilities for handling grain at the port of Karachi are capable of considerable improvement. We understand that a scheme for faster unloading by the setting up of port silos or elevators, with adequate facilities for unloading and bagging wheat from the elevators for shipment upcountry, has been under consideration for a number of years. Urgent attention should now be given to the implementation of this proposal which would avoid detention of ships, wastage of grain at the port, excess usage of freight wagons, extra expense for double handling and all the consequent delays which are now prevalent. It will also increase the facilities of the port for handling other materials. It may be possible to get some equipment immediately which may later fit in with the main scheme.

41. It is a matter of urgent importance that adequate storage is provided and that the movement of wheat is ensured on a regular basis to the stores in the main consuming areas. Stocks must be available in all areas to meet any tendency for prices to rise. This is a fundamental part of government policy and if in any area, the stocks are not available and there is a consequent rise in prices above the safe level, a spiral could be created which might affect the whole country. We understand that adequate storage exists or the creation of it is in hand at the moment. We would suggest a review of the situation not later than the end of March to ensure that this condition is fulfilled. Should there be a delay in the provision of adequate storage, hired storage should be obtained pending the building of permanent stores.

42. We would also urge encouragement of the building and maintenance of good grain storage on private account. Action should be taken to ensure that railway and other transport facilities are organised so that the grain line runs smoothly and is kept full. We would not hesitate to recommend special measures even to the extent of requesting the army to use its transport, should this be necessary.

43. We would suggest that the movement of wheat on private account should have the highest priority as in the case of government stocks and

wagons should be made available to private trade on demand to enable it to move wheat quickly from surplus to deficit areas. Free movement is essential from the day the controls are removed, as otherwise shortages may develop. The movement of stocks on government account will be taking place on a large scale during this period and unless special action is taken, trade movements will be hampered.

14. Adequate provision and control of financing of the wheat trade are further important factors. Many troubles begin when monopolistic tendencies take charge of the foodgrain trade. Traders are known to have deliberately created shortages to secure high prices. One way to defeat these tendencies is to introduce competition which would be forthcoming if finance is provided. We discussed this matter with the representatives of the Ministry of Food & Agriculture, the Ministry of Finance and the State Bank of Pakistan. As a result of these deliberations we recommend that the State Bank in consultation with other banks should immediately introduce the following policy:-

- (i) More liberal credit should be made available to enable the trade to operate in foodgrains, especially wheat and rice.
- (ii) Loans issued against hypothecation of rice and wheat stocks should be kept separate and steps should be taken to see that general credit limits are not allowed to cover loans for trading in wheat and rice. These loans should be demand loans recallable at any time and not time limit loans.
- (iii) Whenever there is a tightening of the market in the country as a whole or in any part of it, the State Bank, at the request of the Ministry of Food & Agriculture, should ask the banks to recall such loans or a portion of them to force stocks on to the market.
- (iv) Arrangements should be made so that information on stocks held on such loans is made available to the State Bank and the Ministry of Food & Agriculture.
- (v) The State Bank should take steps to set up necessary organisation to implement this policy.
- (vi) As in the former Punjab and some parts of former Sind, the primary loaning comes substantially from the cooperative banks, it is important that the Registrar of Cooperative Societies, West Pakistan, should take similar action in the matter of Central Cooperative Banks or other institutions under his control.

45. We are in agreement with the Resolution of the Cabinet under which it is proposed to assume control over the operation of flour mills, especially the fixing of percentages of wheat to be taken from government stocks and

milled, prescribing the percentage of flour extraction and specifications of atta and also the fixing of ex-mill wholesale rates from time to time.

46. The subject of floor and ceiling prices of wheat is under examination as is the question of price support. We will be able to discuss these matters in our final report and are not, therefore, suggesting at this stage any changes in the already announced government policy. We should, however, like to draw attention to one aspect of this problem. If the year proves to be a good wheat year, it is possible that the government may have to come into the market to maintain the price of Rs. 13-8-0. This is very important as a heavy fall in prices would adversely affect further attempts at increasing wheat production. In deficit areas, the prices will normally tend to be higher than those in the surplus areas and as the government will be purchasing wheat in the surplus areas at Rs. 13-8-0 per maund, the likelihood is that the prices in the deficit areas will be higher. However, there is a chance that there may be some pockets in deficit areas where through lack of proper trading arrangements, prices may temporarily sag. This would be undesirable and we feel that the staff looking after the reserve stocks should be authorised to make purchases wherever offered at Rs. 13-8-0 per maund.

47. Doubts have been expressed as to whether an issue price from government stocks of Rs. 15-8-0 and a likely ceiling round about Rs. 17/- or Rs. 17-8-0 would not give too much margin to the trade and develop a tendency to depend more and more on government stores. We, however, understand from the Ministry of Food & Agriculture that the issue price of Rs. 15-8-0 was based on certain assumption of the cost of importing this wheat and that on recalculation, this price is likely to be Rs. 16-8-0 and the upper limit is round about Rs. 17/- or Rs. 17-8-0, there need be no apprehension.

48. One of the most important requirements of the new programme is the availability of reliable information on prices and the promptness of the organisation concerned in releasing stocks wherever price spirals are

likely to form. A part of the present large staff of the Food Department could be used to provide this information. There will be an advantage, however, in creating a special market information section, which could include the present staff engaged on collecting market information for other departments of government. We are later suggesting the establishment of a Food Price Stabilisation Board. If that proposal is accepted, the creation of such an information service would be one of the fundamental duties of that Board, but, if that proposal is not accepted, an integrated market information service should be established immediately.

49. The Cabinet Resolution has emphasised the need for remaining poised to re-establish controls if any emergency arises. If the wheat crop is good and the visible stocks are adequate, there may be no such need but if either of these requirements is absent, a crisis may arise. We understand that it is the intention of the Provincial Government to maintain the staff at its present strength for the next year. A review of the staff position by a small independent committee of the Provincial Government would, however, be desirable to see that unnecessary staff is not retained. The need for the existence of adequate staff, however, should not be minimised. We envisage a permanent set-up for food administration as it is a matter of utmost importance that the food position continues to be watched by government. This set-up may take the form of Food Price Stabilisation Board as suggested, but if it is decided to work through the Food Department, then it will be essential that organisation be not completely disbanded.

50. In view of the importance of keeping track of stocks, wherever possible, we suggest the amendment of government decisions on the following points:-

- (i) We have already suggested the maintenance of information of stocks held by merchants against credits advanced by banks.
- (ii) We suggest that licensing should not be done away within the first year, but that every person trading in wheat and rice be required to take out a licence with the sole obligation of making proper monthly returns of stocks. We feel, however, that the grant of such a licence should be automatic, and that the licence may be purchased from the post offices as in the case of radio licence without the need of sanctions. A copy of such licence would go to the Food Officer

concerned, who would watch the receipt of information. We appreciate that there is a general desire to get away from such controls, which gives openings to abuse and may expose small traders to petty tyranny, but on balance we consider those precautions necessary in the first year so that adequate knowledge of where food is being held in the trade is available to government. Such knowledge might, however, be obtainable, and abuses minimised, by limiting such licensing to wholesale dealers,

(iii) We further recommend that all land owners who are assessable for agricultural income tax, be required to furnish similar information.

51. One of the difficulties of food administration in the past has been due to the fact that government intentions in food administration had not been adequately made known. There is need for a regular procedure for disseminating true information on the situation more widely.

52. We feel that with these measures there is a reasonable chance of the success of the new policy.

West Pakistan

53. The 1959 rice crop has been coming into the market since October and it is understood that 100,000 tons of Sind rice and 7,000 tons of Punjab rice has already been purchased or moved to Karachi in accordance with the present policy. About half of the Sind rice has been sent to East Pakistan. It is obviously now too late to consider any modifications in the policy for the 1959 crop; any alterations which the Commission might suggest could only come into operation for the next crop and we propose, therefore, to deal with the matter in our final report. Attention, however, should be drawn to two aspects which might be kept under review:

- i) Any procurement and export of rice above the normal quantities will put extra pressure on the available wheat supplies. This has added importance in view of the slow building up of wheat reserves.
- ii) The adherence to the policy of not allowing rice to move into the consumer markets of West Pakistan imposes a hardship on rice-eaters, particularly Kashmiris.

East Pakistan

54. As discussed earlier in the chapter, procurement and food policies are already moving in the same direction as the proposed wheat policy. A major difference is that there is no new ICA agreement to maintain stocks of rice. It is understood that the East Pakistan Government have under

consideration a proposal to fix a ceiling price for rice at which level government will release stocks. It has announced that it will purchase paddy at Rs. 12/- per maund and milled rice at Rs. 10/- and Rs. 19-11-0 per maund (according to the quality of milling). Private trade is already operating in the market and as all procurement is to be voluntary this year the position will be the same as that proposed for West Pakistan.

55. At the beginning of January 1960, the East Pakistan Government had stocks of 200,000 tons of rice and additional supplies expected were:

150,000 tons of Sind rice; (over 40,000 tons of which have already been supplied)
255,000 tons of rice from Burma; &
50,000 tons from the ICA.

56. This indicates a total probable import of 455,000 tons during the year. Should this not meet all needs, an additional 100,000 tons will be available from Burma.

57. The estimate of the Aman crop has not been finalised but all information indicates that the crop will be one of the best in recent years and that if the 1960 Aus and Boro crops are normal, then total production will be over 8,000,000 tons. Estimates of consumption, which do not claim to be very accurate, are around 8,000,000 tons. East Pakistan is, therefore, in a very good position to start on a policy similar to that proposed for West Pakistan as there is a probable reserve of nearly 500,000 tons of rice in sight. Good storage is available for 350,000 tons and fairly good storage for a further 250,000 tons.

58. It is understood that the East Pakistan Government is considering such a new food policy. The floor price under consideration is stated to be that already operating, but the ceiling price has yet to be determined. We consider that the issue price should be fixed so as to allow a reasonable margin for private trade to operate between surplus and deficit areas. Major obstacles to such trade are the difficulties of transport and the lack of organised markets in East Pakistan.

General

59. In view of the possibility of a strong rice reserve position in East

Pakistan we recommend that consideration be given to retaining some of the Sind rice in West Pakistan at least until final estimates of the Aman crop are available. This should be done only if the available storage accommodation for wheat in West Pakistan is not adversely affected.

60. No recommendations are being made in the meantime regarding the level of floor and ceiling prices. This matter will be studied in detail and recommendations made in our final report.

61. These new policies will affect the level of wheat and rice prices and in the case of wheat must substantially raise prices to the consumer. This may result in some hardship to low income groups. It is understood that the matter of increased cost of living allowance is under consideration for low paid government servants. We suggest that the Ministry of Social Welfare look after the interests of other workers. In industrial and commercial establishments we feel that the present selling prices of goods produced could bear higher wages. Real hardship may be caused to casual labour in whose case there may be a time lag before wages rise. In view, however, of the large number of development schemes being started by WAPDA and other agencies, it is considered that job opportunities will increase. It is suggested, however, that a continuance of some form of modified rationing such as already exists in East Pakistan may be necessary to avoid hardship. Such a scheme might also be introduced in West Pakistan. Care would have to be taken that the compilation of the lists of low income groups to ensure that this was done as accurately as possible.

FOOD PRICE STABILISATION BOARD

62. The desirability of establishing a Food Price Stabilisation Board has already been mentioned. The advantages of setting up such a Board arise from the fact that in dealing with commercial matters, government departments are usually too much bound down by rules and regulations and are too inflexible to move freely and promptly in matters which require quick decisions and actions. The Board which is envisaged should have in its membership considerable knowledge of commercial and business methods.

and should not be trammelled by financial or by staff rules and regulations. It should be free to act on its own initiative, within government declared policy, and should be capable of expanding or contracting at short notice. It must keep in very close touch with trade and give encouragement and guidance to trade developments. The principal functions of the Board would be to manage the grain reserves, handle imports, establish and operate the stores and through these operations maintain prices inside the agreed limits. It could also, where necessary, encourage and assist in developing exports.

63. It is recognised that government has direct responsibility to maintain food supplies at reasonable prices and cannot divest itself of its responsibility. We suggest, therefore, that the Board be a semi-independent authority which will be appointed by government and will be required to work within the laid down government policy. The Board would replace the Food Departments in all except policy functions.

64. Two members of the Commission Mr. G. S. Kehar and Syed Inait Hussain Shah do not agree with the proposal to set up a Board. They consider that the Food Department has been working reasonably satisfactorily and that instead of setting up a new organisation, the weaknesses of the Food Department should be remedied and that it be allowed more initiative and flexibility to carry out the required work. The majority of the Commission, however, though not disagreeing entirely with these objectives felt that a semi-independent organisation can operate more efficiently as an instrument of government in matters requiring vital and quick decisions and continuous attention.*

65. We suggest that the Board should consist of nine members made up as under:-

One member to represent each of the following interests: (i) producers (ii) consumers (iii) the grain trade (iv) the flour mills (v) the State Bank (vi & vii) one from each of the Provincial Governments to ensure

*Mr. Kehar's note may be seen in Appendix V.

liaison between these Governments and the Board, (viii & ix) one each from the Ministry of Food & Agriculture and Ministry of Finance of the Central Government.

66. The Chairman should be full-time officer and should also be the Chief Executive of the Board. He could either be a senior official familiar with marketing and foodgrain problems or a business man with wide experience in such matters. In any case he must be a man of initiative and drive.

67. The Board should have a constitution which allows it to recruit and dismiss its own staff without recourse to government procedures. It should maintain commercial accounts and be subject to commercial audit, but this should not affect the Auditor General's responsibilities in the matter. The primary object of the Board would be to maintain supplies and to keep prices steady and it should not be expected necessarily to make a profit, though in good years it might do so. Its finances would come primarily from government sources but it should be able to get loans from the banks with government guarantees.

68. We consider that the Board should set up and maintain an efficient market information service in all parts of the country. Such an information service should be organised so as to ensure that changes in prices or in stocks can be anticipated and early action taken to keep the market steady. It will be essential that the Board and its officials maintain close contact with government officers and committees in the districts.

69. This Board might also operate on behalf of government in the distribution of sugar at the wholesale level and take charge of the godowns. Some of its expenses could be met from the profits on sugar. Although in the early stage it might operate in wheat, rice and sugar only; consideration could be given later to extending its responsibilities to other food stuffs.

70. A draft bill is attached setting out our ideas about the operations of the Board. This will need vetting by the competent authorities*.

*See Appendix VI.

C H A P T E R I I I

SECTION I - DEVELOPMENT CORPORATION

71. One of the important questions referred to us is whether organisations on the lines of PIDC or WAPDA, or on the lines proposed in the West Pakistan Agricultural Development Corporation Act should not be immediately set up in the country to give an impetus to agricultural development. In the first chapter we indicated that our approach to the problem of agricultural development is to look at the whole problem from the point of view of the farmer. We have also suggested there the lines of approach which are necessary for an overall attempt to resolve the problem.

72. The search for an organisation or organisations capable of handling the vast problem of changing the concepts and practices of men steeped in traditions dating back to a remote past, of men with very small means who cannot, on their own, find sufficient capital to put into operation newer methods of development, and of men who have still very limited knowledge has been occupying governments and development authorities for a long time. In some places, government departments have undertaken this work. In others, banks have played the major role. In yet others, special semi-independent organisations have been created which have been assigned definite and limited roles mainly in the supply and credit field or to carry out specified commercial developments. In other places, organisations like super-departments or coordinating committees have come into being to play a coordinating and dynamic role. In some countries, on the other hand, the whole government machinery has been brought into motion to achieve the objective.

73. These methods have had varied degrees of success and failure. The experience in all the countries of the world does not point to any single system, which would clearly give the answer. We have made a preliminary examination of the situation so far as the present departments dealing with agriculture are concerned.

74. In Pakistan for historical reasons, the subjects which affect the

farm and the farmer are handled by a large number of departments. The Agriculture Department looks after soils and fertilisation, plant production and plant protection. The Animal Husbandry Department looks after animal health and animal breeding. The vast fields of livestock nutrition and management and the planning of crop rotations to provide cattle feeding have been almost forgotten perhaps through lack of definition of spheres. Similarly, attempts to introduce balanced farming, have been neglected. Credit is looked after by the Cooperative Department, the Revenue Department, the Agricultural Development Finance Corporation and the Agriculture Bank. Marketing is handled by the cooperatives and special departments or sections of departments. The vast field of extension is dealt with by the Department of Agriculture, the Village-AID and may also be a responsibility of the new National Development Organisation which will include Village-AID and Basic Democracies. Other departments also have their extension staff. Soil conservation and range management have different affiliations, at present the first is housed in the Department of Agriculture while the second is being handled independently by both the Forest Department and the Animal Husbandry Department. Tree growth is the responsibility of the Forest Department. Fisheries are handled by separate departments at the Provincial and Central level. Irrigation, salinity, waterlogging and drainage is mainly the responsibility of the Department of Irrigation, though the situation has been somewhat complicated by the coming in of WAPDA organisations in each wing. The field of colonisation, consolidation, land use, taxation, state credit assistance, and general liaison with the rural population, is the domain of the Revenue Department. Many of these functions overlap, in some cases gaps are left, and there is seldom effective coordination.

75. This statement of the present position shows that the responsibility for agricultural production is not limited to any one department and that this vast field is divided, without any utilitarian basis, into many separate compartments. Work is hampered by lack of coordination, mutual exclusiveness and departmental jealousies.

76. Departments have to work under rigid government rules which have come into being to maintain the solidarity and to give security and uniformity to government organisations. The rigidity of these rules was perhaps necessary, and even desirable when the main function of government was to maintain law and order. Modern governments with a development and welfare concept, have been compelled to enter the economic field and have had to undertake economic planning, price support programmes, subsidisation, and even state trading. In this new conception rigidity is a handicap. We are, facing a situation where a balance has to be found between the needs of uniformity and security of the services and the necessity to decentralise responsibility and financial control.

77. The concept of a semi-independent corporation is an attempt at solving this difficulty. For some of our members it is a matter of fundamental principle that wherever government assumes any responsibility, they should discharge it directly through their own organisations (where staff is under their control - where financial allocations are subject to government provision and where constant supervision of government exists). Advocates of this point of view emphasise that the real cause of the failure of departments is that they have not been provided with the facilities and powers which have been accorded to semi-independent organisations, like PIDC and WAPDA, that, if financial control and the power to make decisions and to handle staff freely was given, the departments would have produced satisfactory results. To the holders of the opposite view, the government has such a vast field of work that a certain uniformity of rules, both in the matter of conditions of the service of their employees and financial control, will always be necessary, as otherwise abuses might occur. They feel that for the implementation of specific programmes, special semi-independent organisations may give more satisfactory results. The sphere of action of such organisations is usually limited and thus adequate safeguards in their operation are possible even with fewer controls.

78. The Food & Agriculture Commission is examining this problem

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with the object of finding the necessary organisations to achieve the objective of increasing agricultural production and raising rural income. As the problem has many facets, perhaps only an integrated solution will give results. The final solution may be in using all the various types of organisation each with well defined spheres of work within a general framework. Our studies in this field are still not complete and for many reasons our solution to the problem can only be given in our final report. At this stage, we would only outline a few points which have a bearing on the subject.

79. It is obvious that while agricultural production has undoubtedly increased in the recent past, it has not kept pace with the national needs and the objective of making Pakistan self-sufficient in the agricultural field has not been achieved. It is also true that the departmental set-up is heavily circumscribed by factors which seriously handicap its efficiency. Some departments have better facilities at their disposal than others. For example, the staff of the Irrigation Department has facilities for housing and transport, which are not available to the Department of Agriculture. The Revenue Department has a prestige because of its executive power which is not shared by the Departments of Agriculture, Animal Husbandry, etc. The departments which have been called Development Departments, such as Agriculture, Animal Husbandry, etc., have inadequate staff and have not been able, except in very recent years, to get financial sanctions for increases in their organisations. Nor have their officers been given the salaries on the status which are accorded to the Revenue Department and some other departments. The Department of Cooperation has been given a limited field and its salaries and staff are not adequate. Organisations for giving efficient farm management advice or farm management do not exist.

80. Departments, as constituted at present, cannot ensure increased agricultural production until the whole set up of government service and financial control is reorganised, and the status and salaries of the technicians are brought to a level which will attract the best brains in the country. Coordination on an objective basis must also be provided.

81. Government by committees is now a feature of many administrative organisations in this country and elsewhere. While this has some advantages it suffers from the basic defect that decisions tend to be made without proper examination, and that unity of command is lacking and that in case of failure responsibility cannot be fixed. It does provide coordination but not at the implementation level.

82. Quite different is the conception of a semi-independent organisation. The outstanding example of this has been the PIDC which has stimulated the growth of industry in this country with a rapidity which has been envied in other fields, and which has been responsible for the creation of a number of other organisations such as WAPDAs in East Pakistan and West Pakistan, the Inland Water & Transport Authority in East Pakistan, and the Forest Industries Development Corporation of East Pakistan. Conversely corporations, such as the Refugee Rehabilitation Finance Corporation, the Pakistan Industrial Finance Corporation, the Agricultural Development Finance Corporation, the Thal Development Authority, etc., have been held up as examples of the failure in various degrees of independent authorities. The panel, which was requested to give us its views on this subject and which included the heads of most of the departments concerned with agricultural production, was almost unanimous in the view that this approach will not prove to be satisfactory except in limited fields.

83. We would like to emphasise that there is a vast difference between the setting up an industry (where a specific task can be easily planned and financed as a separate entity with little need for coordination with other industries) and the problem of persuading people to change their whole outlook and mode of life. In the first case, a factory can be erected and machinery installed with technological advice available within our outside the country, while in agriculture persistent and continuous efforts are needed to infuse new knowledge in the people to bring supplies and credit to them in their villages and to organise them to take better advantage of these services. Above all, the confidence of the people has to be won. In the industrial field, the labour is employed for a limited objective and can be sent

away if it is not competent. In the agricultural field, the land is privately owned and if the owners are unwilling to cooperate in our programmes, it cannot be dispossessed. This review of the situation led us to the conclusion already mentioned that our attack has to be at different levels through all types of organisations.

84. We propose to recommend the reorganisation of research to provide a firmer basis for our programmes. We would like research to be closely linked to the needs at the farm level, with the definite objective of increasing production and farm incomes. We are considering the strengthening of the field staff so that on the one hand the knowledge gathered by research inside and outside the country is carried to the farmer by men who can win his confidence, and on the other take the farmer's problems to the researchers who are equipped to find an answer. The question as to whether this can be done by one organisation or by several is being considered. We need organisations, which may be of semi-independent or commercial in character, which will be able to take the supplies needed for increasing production to the farmer's door step. It will be necessary to see that these supplies are linked with education on how to use them. We have to find a basic organisation at the farm level which will provide farm management guidance to all farms and be able to organise the uneconomic farms into a cooperative or combined system to enable better planning, and better use of credit, irrigation systems and machinery to be practised. We have to look for organisations which will enable the farmers to store, move and market their produce to the best advantage. Finally, we would like to see arrangements for a regular review of taxation, tariffs, incentives and other policy questions with a view to encouraging agricultural production.

85. These objectives will require the strengthening of the agricultural departments, the re-orientation of the cooperative set-up, and the creation of coordinating committees or semi-independent authorities. It may also be of development for highlighting attention on certain aspects of the matter. In the present report, we have suggested one such campaign and we have

recommended the creation of one corporation in the form of a Food Price Stabilisation Board. We will be making other recommendations in the course of our work and will be able to consider whether such organisation should be separate entities or should be parts of a central organisation with several branches covering different aspects of work.

86. At this stage we wish only to say that the establishment of semi-independent authorities would appear to be likely to give good results in specified fields. These fields may take the form of area organisations which would undertake the overall developments of a particular area, keeping in the forefront of its plans some specific over-riding objectives. There would appear to be a good opportunity of establishing such organisations in new areas which are being developed and in which past traditions will not be a handicap. Corporations might also work in the field of land reclamation and on fighting salinity and waterlogging. They might operate where heavy machinery is required and could be organised on a semi-commercial basis. Corporation concepts might also suit certain commercial functions.

SECTION 2. REORGANISATION OF MINISTRY OF FOOD & AGRICULTURE

87. The Commission has considered the report of the Reorganisation Committee in so far as it relates to the Ministry of Food & Agriculture. Any reorganisation of the Ministry of Food & Agriculture can only follow the decision of the question on what is going to be the final picture of the relations of the Centre and the Provinces. This question is unlikely to be clear until the proposed Constitution Commission completes its work. One of the basic problems to which the Food & Agriculture Commission has to find an answer is that of an integrated agricultural organisation which would bring the knowledge of new scientific methods to the farmers, would help them to find capital and supplies for the application of new methods and assist them in organising themselves for better management and marketing. Such an organisation if set up would necessarily affect the set-up at all levels of the government including the Centre. Our recommendations on this subject can thus only come in the final report when our studies are complete. Our

present comments, are subject to these considerations and we may in our final report make suggestions which may differ substantially from the comments made now. Present comments are primarily concerned with the Reorganisation Committee report.

88. We can see no objection to the proposal to transfer of the Directorate of Defence Purchase from the Ministry of Food to the Ministry of Defence provided that the Directorate gets all its supplies of wheat, rice and sugar from the Ministry of Food and does not operate directly in the market in these commodities. We also agree to the abolition of the Directorate of Sugar on the assumption that sufficient staff will be added to the Ministry to handle the problems of sugar price fixation, sugar allocation and general control on manufacture of edible oils. Should sugar imports again become necessary additions would have to be made to the reduced staff.

89. We are not in agreement with the proposed reduction of the staff in the Directorate of Foodgrains and Storage. Much larger imports are to be made during the next two years under the new Food Policy and a careful watch will have to be kept on the market. We suggest that a strengthening rather than a reduction in staff may be necessary. The duties of watching over the foodgrain trade are, in our opinion, essentially permanent duties for, whatever organisation undertakes them, the nation must be protected against the risk of a food crisis by intelligent anticipation and efficient management of reserves and distribution.

90. We have made proposals for the setting up of a Food Price Stabilisation Board. If this proposal is approved, the Food Directorate will become superfluous and some of its staff could be absorbed into the new organisation. If this happens the only food staff needed will be in the Central Ministry.

91. In the Agriculture Division we consider that the Centre should, in consultation with the provinces, deal with the national aspect of policy, planning, financing and evaluation of the agricultural programmes and that

the implementation should be left primarily to the provinces. The Centre will have to handle international contracts and foreign aid. On the basis of this division of functions, the Agriculture Division will have to handle a considerable amount of specialised work and the head of the Ministry will require considerable assistance from expert knowledge. We do not, therefore, agree with the proposal to reduce the level of such assistance. As we will be examining the whole of the question in detail later, we suggest that this Division be maintained as it is until our final report is submitted. We feel, however, that unless our proposal to set up a Food Price Stabilisation Board is accepted, two Joint Secretaries, one each in the Food Division and the Agriculture Division, will be really necessary.

92. If, however, it is felt that for reasons of economy and urgency action on each recommendation is necessary, our views are as follows:-

- (i) We do not agree that an attached department of Expert Advisers as is proposed will improve matters. A department of advisers with no executive functions will merely act as a bottleneck.
- (ii) We feel that the minimum number of experts necessary to advise the Minister and the Secretary is:
 - (a) One Director of Agricultural Economics who should act as Economic Adviser and also handle Statistics, market and crop studies, and market information.
 - (b) An Agricultural Adviser who should be the top agricultural expert to advise on crop production and who may be assisted by experts dealing with soils, fertilisers, agronomy, horticulture, machinery, etc.
 - (c) Animal Husbandry Adviser who may be assisted by a Dairy Expert.
 - (d) A Cooperation & Credit Adviser.
 - (e) A Forestry Adviser.
 - (f) A Range Management Adviser.
- (iii) Until the responsibility for marine fisheries is decided, we would suggest the retention of the Directorate of Fisheries on its present level. The Director could act as Fisheries Adviser.
- (iv) The field work of Directorate of Plant Protection should go to the provinces as early as possible. Sufficient staff of the Directorate, however, will have to remain at the Centre to handle Locust Control, international coordination programmes and international quarantine. The Director should act as Adviser on Plant Protection. Import of machinery and pesticides for plant protection work should be handled by the Central Ministry of Agriculture.
- (v) We do not propose at present to make any suggestion regarding the Research Organisation as we have not been able to study the matter fully. We suggest that the Food & Agriculture Council of Pakistan may be retained in its present form pending our final report.

- (vi) The Zoological Survey is a minor part of the Ministry's work. We see no objection to its transfer to the Province but consider that for the purpose of national coordination the responsibility for this may be placed on the Animal Husbandry Adviser.
- (vii) We agree with the proposal of the Reorganisation Committee regarding the Agricultural Census and the Survey of Pakistan.
- (viii) We recommend that the Wool Grading Organisation should become an independent Directorate and be called Directorate of Standards & Grading, and be charged with the responsibility of developing schemes for standardisation and grading of other commodities. Separate sections may be set up where necessary.
- (ix) Because of an increasing import of fertilisers the section of the Ministry handling this matter will have to be strengthened immediately.
- (x) We consider the recent transfer of the work of Irrigation to the Ministry of Agriculture to be very useful and important. We envisage that this will require an additional adviser on irrigation and drainage. We suggest that expert assistance in the matter of farm irrigation would certainly be of advantage.
- (xi) If the Water Dispute and WAPDA work is to be handled by the Ministry, the Secretary will need the help of an additional Joint Secretary with one or two Deputy Secretaries. Some of this assistance will probably be received on transfer from the Ministry of Works.
- (xii) We agree that the Pakistan Animal Husbandry Research Institutes at Peshawar, Comilla and Karachi should be transferred to the provinces.
- (xiii) We understand that the Central Soil Conservation Organisation has already been passed on to West Pakistan.
- (xiv) We see no objection to the transfer of the Forest College and the Forest Research Institute to West Pakistan, and the East Pakistan Forest Research Laboratory to East Pakistan, provided that arrangements can be made to cater for the students from East Pakistan at Peshawar and that research in Forestry and Forest Products Utilisation is planned for both the wings at the West Pakistan Research Institute and Chittagong Laboratories respectively.
- (xv) We will reserve comments on the need for an adviser on Extension and Community Development for our final report.

SECTION 3. NATIONAL DEVELOPMENT ORGANISATION

93. Recently the government set up a National Development Organisation based on the present Village-AID set-up. Under the new arrangements, the chain of responsibility will be the Provincial Village-AID Administrator, a Director at the divisional level, a Deputy Director at the district level, and an Assistant Director for each tehsil or sub-division. Under them will be Development Officers of the Village-AID as functioning already. We understand that it is proposed to cover the whole country with Village-AID

during the next one or two years and this National Development Organisation will undertake all developmental work in the rural field. This is allied to the concept of the Basic Democracies. The Tehsil Advisory Committee, composed of the Chairman of Basic Democracies, will be assisted by the Assistant Director, the district one by the Deputy Director, the divisional one by the Director and the provincial one by the Provincial Administrator. We understand that at the tehsil level in West Pakistan, the officer will normally be a Development Officer, but where the tehsils are too large or there is no Development Officer, an Assistant Director will be posted.

94. As discussed earlier one of the lines of development could be a district team approach, which might be similar to the present National Development Organisation set-up. We are, however, not yet satisfied that officers of this Organisation will be qualified to play a coordinating role between the technical department and the farmers. The picture has still to be filled in. We are examining the situation and will be making recommendations later. When considering this subject, we feared that this new development organisation might only be yet another agency in a situation where coordination of functions and the utilisation of expert knowledge is still a serious problem. We discussed this matter with the Chief Administrator in charge of this work and suggested to him that for the time being at least the officers of the new organisation should be officers lent from other departments and should not be placed on permanent or semi-permanent basis. Our reason for this is that we want to prevent the birth of a departmental mentality in the new organisation which might aggravate the unhealthy rivalry between the departments for the services of the limited number of skilled men in the country. We make this interim recommendation pending a fuller examination.

CHAPTER IV

CRASH PROGRAMME FOR 1960

Section 1. ProgrammesGeneral Background

95. We believe that a crash programme may have great value in two directions. It would impress on every one in the country the great importance which government attaches to agriculture. This is important because in the past agriculture has been neglected and has not been given the same attention as other sectors. Secondly the crash programme could achieve considerable increases in production even if confined to a few limited objectives. Initial indication of the potential value of a crash programme is already available in the 26,000 demonstration rice plots which were established in a very short span of time in East Pakistan on the direction of provincial headquarters. In West Pakistan also the unprecedented quantity of 60,000 tons of sulphate of ammonia has been applied to the present Rabi crop and more land has been brought under the plough. These and other factors have convinced us of the potentialities of a large coordinated effort in increasing the Kharif crop in West Pakistan and the Aman crop in East Pakistan.

96. In our proposals we have not included the immediate Aus rice crop in East Pakistan as there is no time to take effective action on this. We hope to make recommendations later on the Aus crop of 1961, on the next Rabi crop in West Pakistan, and on the potato crop in both wings.

97. A crash, or high pressure programme, such as we contemplate, has a number of limitations. It cannot undertake educational work or break down long established prejudices nor can it deal with matters which do not give quick returns. It must be a coordinated effort where all the resources of the nation are mobilised and concentrated in a limited field to attempt to secure a few well defined simple objectives. It will demand, however, much greater effort than hitherto, to secure results at the farmer's level. We recommend, therefore, that efforts be confined in the present programme to the rice crop in both provinces and to the cotton and maize crop.

West Pakistan. Rice, as a staple food crop, suggests itself and maize has tremendous potentialities. Increased cotton production is one of the matters which has been specifically referred to us. We understand that arrangements are already in hand to increase sugar production.

98. Action which can have an immediate and considerable effect on production is the increased use of fertilisers and plant protection measures the use of improved seed, the improvement of irrigation and the introduction of better cultural practices. The need for the last two factors varies from place to place and from crop to crop and they require more sustained pressure and more elaborate preparation and education. They are extremely important to increased production but are difficult to include in a crash programme. We have previously given reasons why the use of improved seed is not included in this programme. We recommend, therefore, that efforts be concentrated in the crash programme on the greater use of fertilisers and of plant protection measures. When the question of increasing the production of cotton was referred to us, the need for using all possible means was emphasised and we have included certain other methods, in addition to fertilisers and plant protection, in our plans for this crop.

Fertiliser

99. Fertiliser use, particularly the use of nitrogen, has been rising steadily in the country but the build-up is still too slow to make any national impact on production. Greater efforts to extend its use are needed, and from an angle other than that of production, are urgent. The fertiliser factory at Daudkhel is now producing 50,000 tons per annum of sulphate of ammonia. Two new factories, one in each province will come into production in 1961-62 and turn out the equivalent of a further 500,000 tons per annum of sulphate of ammonia in the form of urea or ammonium nitrate. A ridiculous position would arise if we were not able to use this fertiliser which is so badly needed to raise production. A national effort to popularise fertiliser use is obviously necessary.

100. Our discussions in the villages convinced us that there is a much

larger fertiliser consciousness and potential demand than is generally believed. If a number of bottlenecks can be removed the use of nitrogenous fertilisers can be greatly and quickly increased in West Pakistan. In most areas of East Pakistan, a combination of nitrogenous and phosphatic fertilisers give the best results and many farmers are already aware of this. We propose the use of a combination of the two in our programme there.

101. The actual additional production, which will result from the application of fertilisers, has not been fully established and, in any case, vary to some extent from season to season. The data available, however, suggest that the application of one bag of the recommended fertiliser in East Pakistan will give an additional six maunds per acre of paddy, and in West Pakistan an additional two maunds of paddy, one maund of seed cotton or three maunds of maize. The total cost of fertiliser (from both internal and external sources) proposed in this crash programme in addition to that already ordered, will be Rs. 5.5 crores, out of which arrangements for purchases to the value of Rs. 2.2 crores have already been made. The value of the total estimated increased production in rice and cotton alone is Rs. 13.5 crores. Apart from covering amply the cost of the fertiliser, the campaign will increase an exportable commodity which earns foreign exchange while reducing the need to import a commodity now costing foreign exchange.

Plant Protection

102. Plant protection measures form the second item on our programme. At present this is a free service paid for mainly by the Central Government. There is already this year a programme for stepping up the cover provided by the plant protection services from 5% to 11.6% in West Pakistan and from 2.8% to 9% in East Pakistan. Percentages are of the total cropped area. Much of this protection covers sugarcane. The success of even this programme depends on a more coordinated effort and on local help, but we feel that a national effort should go even further and recommend that (1) for cotton, complete spraying should be carried out in the districts of Tharparkar and Lyallpur. These two have been chosen from the major cotton

producing districts. Tharparkar because the concentration of planting lends itself to aerial spraying, and Lyallpur because of the high incidence of disease, (2) For rice, all rice in West Pakistan and 500,000 acres additional to the previous programme in East Pakistan should be protected. These targets have been fixed after consultation with the departments concerned and in accordance with advice regarding availability of technicians, pesticides, implements and transport.

103. The total cost of the additional insecticides has been calculated at Rs. 1.87 crores. Rs. 96 lakhs of this will be in foreign exchange and a large proportion of the balance is required to cover import duty. The imposition of this duty is inexplicable to us and we strongly recommend that it be removed from all plant protection chemicals and implements. This will reduce the cost considerably.

104. Again an exact basis of assessment of probable increased yields from plant protection does not exist. Experimentation is continuing, but on the information available the Planning Commission has accepted the following increase per acre, cotton 2 maunds, paddy 5 maunds in West and 10 in East Pakistan. On this basis increased yields should be of the order of 65,000 bales of cotton to the value of Rs. 2.5 crores, 250,000 tons of rice in West and 125,000 tons in East Pakistan to a total value of over Rs. 13 crores. Even if half of these increases were achieved the costs would be handsomely repaid.

105. The plant protection measures to be adopted would be :-

i) Treatment of seed to guard against seed-borne diseases.

ii) Rice

A. West Pakistan

a) Spraying of all rice nurseries.

b) Spraying of 250,000 acres from the air and 60,000 acres from the ground in the case of broadcast paddy.

B. East Pakistan

Spraying of 500,000 acres, of which 100,000 would be from air.

iii) Cotton

Spraying of 500,000 acres in West Pakistan of which 100,000 would be from the air.

Measures to Increase Cotton Production Additional to
Fertilisers and Plant Protection

106. One of the reasons for the poor yields of cotton is the very low plant population per acre in most farms, probably around 8,000 per acre compared to 20,000 in other countries. A much more dense stand is obviously required if we are to raise yields per acre and get full value from fertiliser and plant protection measures. We hope to get this by line sowing and heavier seed rates. The introduction of line sowing will take longer than one year's crash programme to achieve full results but it is hoped to make a good beginning. This year in some areas, particularly in old Sind, the availability of cotton seed is below normal and it will be more than ever necessary to increase the seed rates. The Department of Agriculture will have to indicate for each area the recommended seed rate. From the adoption of these better seeding methods we anticipate an increase of about 30,000 bales.

107. The panels we set up have made certain further recommendations concerning cotton.

I. That cotton sticks be removed from all fields by the middle of February. This recommendation was accepted by us and passed on to the West Pakistan Government with a request that early action be taken. We understand that an ordinance covering this need has been prepared but there has been some delay in issuing it. The February date should be enforced in future years but even this year an enforcement date at the end of March should be applied.

II. The practice, particularly in the Sind area, of inter-cropping the cotton fields with forage crops leads to a considerable reduction in yields. Experiments have shown that if the crops are sown separately the yield of each and the total yields are higher. The panel recommended that this practice of inter-cropping should be prohibited by legislation. Investigation into the matter should, however, be made that the tenant farmer often has insufficient land on which to grow enough fodder to feed his bullocks and thus has to resort to this practice. Until complete information is available we recommend that advice only be given against the practice of inter-cropping.

108. For the purpose of a summary view, we estimate that the combined effect of fertiliser, plant protection and better seed rates on the cotton crop should give an increase of about 200,000 bales in the coming year. The results of this campaign will give an indication of the possibility of reaching the target of 2,500,000 bales by 1965.

Maize

109. Maize is a crop which responds well to fertiliser application. At present little is used on maize in Pakistan and we plan in our campaign to encourage its use in the main producing areas of the Peshawar and Rawalpindi Divisions and also in the Districts of Lyallpur and Shahpur.

110. We have studied the possibilities of the use of hybrid maize as a means of rapidly increasing production but we find that the production of hybrid seed is not sufficiently far advanced to mount a campaign of any appreciable size this year. It has, however, great potentialities for the future.

Extent of the Programme

111. In East Pakistan the campaign will cover all districts except the Chittagong Hill Tracts. In West Pakistan the districts covered for cotton and rice will be all the districts of Hyderabad, Khairpur, Bahawalpur, Multan and Lahore Divisions and the Shahpur and Gujrat districts of Rawalpindi Division. The maize programme will cover the districts of Peshawar, Mardan and Hazara of Peshawar Division, Shahpur of Rawalpindi Division and Lyallpur of Multan Division.

Section 2. Organisation

112. It is obvious that it will not be possible to carry out a campaign of this magnitude without an efficient organisation at all levels. We suggest that the campaign, which may take the form of production operation on military lines, be inaugurated by the President and be under the supervision of the Minister of Food & Agriculture.

113. We recommend that, at each provincial headquarters, a committee be established under the chairmanship of the Governor of the Province which should include as members the Martial Law Administrator, the Chief Secretary and the Secretary of Agriculture or Director-General of Agriculture with the Director of Agriculture as the Secretary. It may be possible to associate one non-official member from each provincial advisory

work, as the programme executive in the district. We suggest the division of the district into sectors and sub-sectors and the appointment of teams of officers who would be responsible for the success of the campaign in their sectors and would make sure that each village is visited regularly during this campaign. The District Magistrate will also be responsible for ensuring that storage and transport for fertiliser and plant protection materials are provided. Frequent tours by Divisional and Martial Law officers must be an important aspect of supervisory control.

116. So that the farmers should get a maximum opportunity of cooperating in the campaign, information should be widely circulated on the following points:-

- i) Dosage of fertiliser to be used for each crop and the time when it should be applied.
- ii) The local depot at which fertiliser is available.
- iii) The method of obtaining credit.
- iv) Arrangements made for seed treatment and for plant protection spray programmes.
- v) Arrangements made for the supply of cotton seed, drills and pores for line sowing.
- vi) The recommended seed rate for this year in the case of cotton.

117. The earliest operation will be seed treatment. One team with a vehicle and a specified number of seed treaters should be assigned to a Union area and visit each village after pre-propaganda and carry out seed treatment. This operation is primarily to be carried out in the rice and cotton areas of West Pakistan. The campaign must start not later than the 15th of April and cover the area by the 1st of June. Each district officer will have to see that all the villages in his district growing these two crops are covered. We understand that adequate pesticides and seed treaters are available with the Director of Plant Protection and Directors of Agriculture. Immediate arrangements should be made to make the necessary supplies available in the districts.

118. The second step will be to encourage proper preparation of land and line sowing in cotton areas. A sum of upto Rs. 6 lakhs has already been placed by the Central Cotton Committee at the disposal of the Director of

Agriculture, West Pakistan, for the manufacture of seed drills including the local type called a pore. These drills should be distributed so as to reach each Union headquarters well ahead of the time of sowing and be freely loaned to anybody who is prepared to use them.

119. The spraying of rice nurseries in West Pakistan would be the next item. This would be mainly carried out under the supervision of the technical staff of the Agriculture Department and under the control of the district committee. It may be necessary to supplement this staff and we recommend that any staff required by the Director of Agriculture from the Village-AID and Cooperation Departments should be made available to him. He should have them in time for a short training and then place them at the disposal of district officers, who would assign them to various sectors. The availability of staff and transport will have to be planned well ahead. The Director of Plant Protection will be able to spare 40 vehicles from the pool of transport for locust work. Further needs must be met by district officers.

120. Aerial spraying of rice and cotton fields will be controlled by the Director of Plant Protection who will have to draw up his programme in cooperation with the authorities which we have recommended for controlling this campaign. For ground spraying in both provinces some assistance will have to be provided as in the case of nursery spraying.

121. We are indicating in the following sections the supply programme for plant protection materials and fertilisers. It is important that the material should be in position in East Pakistan and the old Sind area not later than the middle of June and in the rest of the country not later than the end of June. The first step necessary will be the monetary sanction. This we hope can be given by the Cabinet as soon as this report is accepted. The next step will be for the Director-General of Supply & Development to make arrangements for supply. It is essential to the success of the programme that the normal routine of tender notices should be eliminated and orders be placed immediately either on the basis of the tenders now being finalised or on the basis of very short notice enquiries. The materials must

be shipped so as to reach Karachi and Chittagong by the end of May and arrangements must be made with the railway for immediate transport. Where there are difficulties road transport should be used.

122. The rates and time of application of fertilisers will differ with areas and crops. A note by Dr. Ghani, a member of the Commission, covering East Pakistan rice crop is appended to this report. It is important that appropriate instructions be drafted by competent technicians well in advance and printed and made available to the district staff before the middle of April.

123. One very important factor in the fertiliser programme will be the establishment of stores as near the farmer as possible. At present 1,229 fertiliser depots exist in West Pakistan and about 1400 stores at Thana level in East Pakistan. In the West most of the depots are in the form of agencies held by traders, while in the East stores are owned by the Agriculture Department. The stores in East Pakistan are not all satisfactory as many have kacha floors and thatched roofs. We recommend that the provincial governments be given financial assistance for establishing and improving the storage, wherever necessary, but in the meantime, the District Magistrates should be made responsible for finding storage accommodation at Union level and hiring where necessary.

124. One further point of considerable importance is the need for moisture proof bags for fertiliser in East Pakistan, particularly for urea.

125. The Panel on Cotton recommended that, to enable such a large use of fertiliser, the subsidy on fertiliser be increased substantially and that fertiliser (ammonium sulphate) should sell at Rs. 5/- per bag against the present prices of Rs. 8-11-0 per bag in West Pakistan and Rs. 9-11-0 in East Pakistan. We have considered the question of subsidy and while we see the merit of the argument that in such a large scale programme there should be a reduction of price to serve as an incentive, we think that the suggested price of Rs. 5/- per bag is unnecessarily low. We have to take

note of the fact that already quite a number of farmers are using fertilisers at the present price and we are informed that the main hurdles in the way of increasing the use are the lack of credit facilities and the local non-availability of fertiliser. In the future it will be necessary to wipe off or substantially reduce the subsidy. We feel also that frequent changes in the price of fertiliser from year to year may affect its use adversely. Taking all these facts into consideration, we recommend that fertiliser prices should be fixed over at least a three years period. After that the subsidy might be reduced and a suitable time for this would be when the new factories come into full production and costs are expected to be lower.

126. We recommend that for the next three years, fertiliser prices should be as follows:-

A. East Pakistan

- i) Rs. 12/- per bag of 50 kilos of urea.
- ii) Rs. 12/- per bag of 50 kilos of triple superphosphate.

B. West Pakistan

- i) Rs. 7/- per bag of 50 kilos of ammonium sulphate.
- ii) Rs. 6/- per bag of 50 kilos of single superphosphate (from the Lyallpur factory).

These prices will be nearer 50% of the cost.

127. The sale of such a large amount of fertilisers will not be possible on a cash payment basis. Sale on credit will be necessary. Orders exist under which it can be sold on Taccavi but we are informed that this system is not satisfactory, as the formalities and delay in getting the necessary sanction keep quite a large number of farmers from making use of this facility. We feel that it is necessary for the sanctioning authority to be at a lower level and to be easily accessible to the farmer. We, therefore, recommend that the chairman of the Basic Democracies Council in each Union should be authorised to sanction loans for this purpose only. In East Pakistan power to issue loans can be easily delegated under the Public Demand Recoveries Act but in West Pakistan it would probably be necessary to gazette chairmen as Assistant Collectors Grade III for this purpose. We suggest that special forms may be made available (and it will be necessary to print and distribute them so as to reach the Union level not later than the

middle of May) in which the sanction by the chairman will be indicated.

The form should have a provision for an entry indicating that fertiliser has been actually received from the depot by the farmer. When this has been completed the papers should be passed on to revenue staff for inclusion in the demand for recovery.

128. Arrangements should be made early for the movement of fertiliser to the distributing centres. This could be a dangerous bottleneck and it will be necessary to prevent its development by making prior arrangements with the railway authorities especially as foodgrain movement at this time will be heavy.

129. We wish to emphasise again the vital importance of immediate adequate planning for the distribution of the fertiliser down to a level within reach of farmers and provision of storage therefor. Inefficiencies on these two counts would vitally impair the programme.

Section 3. Requirements

Fertilisers

130. Our total requirements of fertilisers, as indicated in the previous Section are as follows:- In West Pakistan, our requirements of sulphate of ammonia are 50,000 tons for cotton, 25,000 tons for rice and 10,000 tons for maize. During the summer season, there is a considerable use of fertiliser on sugarcane and vegetables and unless 25,000 tons for sugarcane and 10,000 tons for miscellaneous crops is arranged for, there will be a diversion to these highly priced crops. We feel, therefore, that a total of 120,000 tons of sulphate of ammonia should be available in West Pakistan during the Kharif season. There is at present no carry over of stock as a very good drive during the Rabi season has used up all reserves. Arrangements have been completed for the purchase of 20,000 tons of sulphate of ammonia and another 24,000 tons will be available from the Daudkhel factory before the end of June. This 44,000 tons will be available for the Kharif crop. The balance of 76,000 tons will have to be purchased. This will cost Rs. 1.9 crores in foreign exchange and Rs. 48 lakhs in internal cost.

131. In East Pakistan, present stocks of sulphate of ammonia amount to 10,000 tons which may all be used for other crops such as sugarcane, boro and aus rice and vegetables. Similarly all present stocks of superphosphate will be consumed by these crops. 9,000 tons of urea, however, carried over from the present stocks will be available for our campaign. Arrangements have also been made for the purchase of an additional 20,000 tons of urea. The total requirements during the summer will amount to 45,000 tons of urea and, therefore, arrangements are needed for an additional purchase of 16,000 tons. With regard to triple superphosphate arrangements have been made for the purchase of 10,000 tons. To satisfy our programme an additional 15,000 tons will be required. These additional requirements of urea and superphosphate will cost Rs. 1.4 crores in foreign exchange and Rs. 21,70,000 in internal cost.

132. Therefore a total of Rs. 4 crores will have to be sanctioned for both East and West Pakistan, out of which Rs. 3.3 crores will be in foreign exchange.

133. We have emphasised that it is absolutely necessary that the supplies already arranged for and the new supplies should reach Chittagong and Karachi by the end of May. If the programme is to be undertaken financial sanction must be given immediately and orders for the additional quantities must be placed at once.

Plant Protection.

134. A plant protection programme considerably in excess of last year has already been planned but as mentioned before, we consider that this should be further increased. Supplies of implements and insecticides for the current programme have already been arranged for and finalisation of tenders is expected by the end of February. These supplies will cover the seed treatment sector of the crash programme but for the remainder of the crash programme the following are the additional requirements:-

P. T. O.

A. West Pakistan

i) Pesticides (Endrin, Diptrex, Gusathion)	Rs. 64,13,780
a) Foreign exchange	Rs. 42,20,250
b) Internal cost	Rs. 21,93,530
(If our recommendation on the abolition of duty on insecticides is accepted, the internal cost will be reduced very heavily).	
ii) Equipment (5,850 Knapsack sprayers)	6,72,750
iii) P.O.L. for vehicles	90,500
iv) P.O.L. for aeroplanes	1,31,500
v) Miscellaneous including additional T.A.	75,000
vi) Making of landing strips	3,00,000
vii) Labour costs	12,48,000
viii) Two foreign pilots	1,50,000
Grand Total	Rs. <u>90,81,530</u>

B. East Pakistan

i) Pesticides	Rs. 62,43,680
a) Foreign exchange	Rs. 40,09,000
b) Internal cost	Rs. 22,34,680
ii) 16,000 Knapsack sprayers	20,24,000
iii) P.O.L. for vehicles	50,000
iv) P.O.L. for aeroplanes	75,000
v) Miscellaneous including additional T.A.	1,00,000
vi) Landing strips	2,00,000
vii) Provision for additional staff	6,55,857
Total	Rs. <u>93,48,537</u>

C. Pakistan

i) West Pakistan	Rs. 90,81,530
ii) East Pakistan	Rs. <u>93,48,537</u>
Grand Total,	Rs. <u>1,84,30,067</u>

Out of this Rs. 98 lakhs will roughly be in foreign exchange.

135. We have provided for the labour cost in West Pakistan and the cost of preparing air-strips in both provinces in the above plans. The labour is needed for actually carrying out spraying and for temporary landing strips which have to be prepared from place to place. Although we have made these provisions in the estimates, we feel that the local people might carry out this work themselves, and so effect a considerable saving. We do not want to jeopardise the success of their campaign through non-availability of money but we suggest that directions should be given to use free labour wherever it can be found.

136. There are firms manufacturing knapsack sprayers locally. It is suggested that they should be allowed to get raw material to make more machines and thus save foreign exchange. The time factor is, however,

important and we would suggest that this should be permitted only if the Director, Plant Protection, is satisfied that these firms can import raw material and deliver the sprayers in time.

137. In West Pakistan, sufficient plant protection staff are available but this is not so in East Pakistan. The provincial government have only a small staff consisting of one Inspector in each district. The Central Directorate of Plant Protection is in charge of the work in the province and additional staff will have to be found to cover the programme. The provision for Rs. 6.55.857 in the estimates is to cover this purpose.

138. We feel that unnecessary haggling over the staffing pattern and the amount of equipment and pesticides should be avoided and the men who are to deliver the goods should be trusted to make the most economic use of the equipment, pesticides and staff. If there is any saving of pesticides and equipment, it will be useful for larger programmes for the next year. We would, therefore, urge the acceptance of the cost and structure, as supplied, subject to other audit checks.

1. AMIR MUHAMMAD KHAN

CHAIRMAN

2. G. S. KEHAR

Member.

3. S. INAIT HUSSAIN SHAH

"

4. S. G. KAEIR

"

5. S. I. HAQUE

"

6. M. O. GHANI

"

7. A. G. BLACK

"

8. A. GAITSKELI

"

9. M. A. CHEEMA

Member/Secretary-General

Government of Pakistan
Ministry of Food & Agriculture
(Agriculture Division)

Karachi, the 11th July, 1959.

NOTIFICATION

No. F. 1-64/59-Estt. The Government of Pakistan are pleased to constitute a Food and Agriculture Commission as follows:

- | | |
|---|------------------------|
| 1. Malik Amir Muhammad Khan,
Chairman, P. I. D. C. | Chairman. |
| 2. Mr. G. S. Kehar, Member
Planning Commission. | Member |
| 3. Mr. S. Inait Hussain Shah
Economist | Member |
| 4. Mr. S. G. Kabir, Retired
Joint Secretary to the Government
of East Pakistan. | Member |
| 5. Mr. S. I. Haq, C. S. P.
Development Commissioner,
West Pakistan | Member |
| 6. Dr. M. O. Ghani,
Agricultural Development Commissioner,
East Pakistan. | Member
(Whole time) |
| 7 & 8. Two Foreign Experts,
(Names will be notified later) | Member |

Mr. M. A. Cheema, C. S. P., Director-General, Central Statistics Office, will be the Secretary-General of the Commission.

The terms of reference of the Commission shall be as under:-

I. The Commission will make a thorough study and evaluation of past and current developmental activities and methods in the field of agriculture and of the incentives which cultivators have to increase production, for the purpose of determining the principal reasons, which have accounted for the rather slow progress in production, particularly of food crops.

II. The Commission will fix the production goals for foodgrains and major non-food crops, which should be achieved in the light of their comparative net value per acre in terms of both rupees and of foreign exchange earned or saved, their comparative claims on limited water supply and the development of the market for them at home and abroad.

III. In the light of its evaluation of past experience and its determination of desirable production targets, the Commission will recommend:-

- i) Any changes in the orientation and focus of the agricultural development effort it may consider advisable.

- ii) Any measures it considers necessary to strengthen the organisation and personnel charged with responsibility for agricultural development at the Centre and the Provinces, including any redefinition of the respective responsibilities of the Centre and the Provinces.
- iii) Any measures it considers necessary to provide cultivators with greater incentives and means to raise their output and income, including those pertaining to taxation, pricing and procurement policies and methods, subsidies, credit and marketing.
- iv) Any improvement in agricultural education and research and, above all, in the methods and organisation for transmitting the knowledge of better agricultural practices to the cultivators through the agricultural extension services, Village Aid Organization
- v) Any revisions in policies and methods of colonizing new lands and maximising production thereon.

IV. The Commission shall pay particular attention to ways and means of obtaining more effective government administration and management of the land by organising the cultivators into cooperatives or other forms of profit-sharing schemes for the carrying out of certain common activities.

V. The Commission shall make a study of the cost, methods and policies relating to the procurement, distribution and storage of food with a view to devising recommendations in this field which will reconcile as far as possible, the requirements of a continuous supply of food to the consumer at reasonable and stable prices and the need to provide adequate incentives to the cultivators to grow more food.

VI. While the Commission will concentrate primarily on ways and means to increase more rapidly the production of agricultural crops, and particularly food crops, it is authorised to extend its inquiry into related fields of forestry, animal husbandry and fisheries for the purpose of viewing the activities in this entire field in proper perspective and relationship to each other.

VII. In carrying out its work the Commission will take into account the limitations on resources in terms of finance, personnel and administration, which may particularly govern what can be undertaken in the sphere of agricultural development and will work out recommendations, which will make the most economical use of these limited resources.

VIII. In discharging its responsibilities, the Commission will work in close cooperation with the Planning Commission. It will recommend specific measures for increasing agricultural production and for effective implementation of agricultural development programmes, and will also, where necessary, suggest changes in policies or emphasis in carrying out the existing development plans.

IX. The study as outlined above will take approximately one year. The Commission may, however, make interim recommendations on specific problems.

Sd/-

(M. Yamin Qureshi)
Deputy Secretary to the
Government of Pakistan.

To
The Publisher,
Gazette of Pakistan,
Karachi.

GOVERNMENT OF PAKISTAN
Ministry of Food and Agriculture
(Agriculture Division)

Karachi, the 27th July, 1959.

NOTIFICATION

No. F. 1-64/59-Estt., In partial modification of para 2 of the Ministry of Food and Agriculture (Agriculture Division) Notification No. F. 1-64/59-Estt., dated the 11th July, 59, the Government of Pakistan are pleased to appoint Mr. M. A. Cheema, C. S. P., Director-General, Central Statistical Office, as Member/Secretary General of the Food and Agriculture Commission.

Sd/-

(M. Yamin Qureshi)
Deputy Secretary to the
Government of Pakistan

To

The Publisher,
Gazette of Pakistan,
Karachi

Copy forwarded for information to:-

1. Malik Amir Muhammad Khan, Chairman, PIDC, Karachi.
2. Mr. G. S. Kehar, Member, Planning Commission, Karachi.
3. Mr. S. Inait Hussain Shah, Zamindar, Khanpur.
4. Mr. S. G. Kabir Rtd., Joint Secretary to the Government of East Pakistan, Dacca.
5. Mr. S. I. Haq, CSP., Development Commissioner, West Pakistan, Lahore.
6. Dr. M. O. Ghani, Member (Whole time)
7. Mr. M. A. Cheema, CSP., Director-General, Central Statistical Office, Karachi.
8. Food Division (Mr. S. A. Kirmani)
9. President's Secretariat.
10. Ministry of Finance.
11. Ministry of Works.
12. Ministry of Finance (Economic Affairs Division)
13. Ministry of Industries.

Sd/-

(M. Yamin Qureshi)
Deputy Secretary.

(CHAPTER I)APPENDIX II(A)SECRET

D. O. No. 2055-F&AM/59

Karachi -1, July 23, 1959.

My dear Chairman,

The question of having Agricultural Development Corporation in the Provinces on the pattern of P. I. D. C. or W. A. P. D. A. for which a draft was prepared by the Government of West Pakistan, has already been forwarded to the Commission for expression of their views. I enclose an extract from President's letter, addressed to the Government of both the Provinces on the subject. The Government will feel grateful to have the views of the Commission on this subject as early as possible.

Sd/- M. H. Rahman.

Malik Amir Mohammad Khan,
Nawab of Kalabagh,
Chairman,
Food & Agriculture Commission,
Government of Pakistan
c/o P. I. D. C. House,
Kutchery Road,
Karachi,

APPENDIX I I(B)

D. O. No. 184(I)/59-Secy.
Government of Pakistan
Ministry of Food & Agriculture,

Karachi, the 23rd July, 1959.

My dear Cheema Sahib,

I am desired by the Minister of Food and Agriculture to request you to advise the Ministry of Food and Agriculture on the general question of procurement prices for foodgrains and specifically for immediate purposes the procurement prices for rice for the forthcoming rice season. The procurement price of wheat will have to be reviewed also, and we would like to make an announcement of the Government decision on this point well before the wheat procurement season. I do hope it will be possible for the Food and Agriculture Commission to examine this matter and to let us have their considered opinion.

Yours sincerely,

Sd/- Ahsan-ud-Din,

M. A. Cheema, Esqr., C. S. P.,
Secretary General,
Food and Agriculture Commission,
Ministry of Food and Agriculture,
Karachi

SECRETAPPENDIX II(C)

D. O. No. 3168-F&AM/59.
Karachi-1. October 24, 1959.

My dear Chairman,

You might recall the discussion I had with you and other members of the Commission on the question of reorganisation of the Ministry of Food and Agriculture.

2. The Reorganisation Committee set up by the Government has made recommendations regarding the future set up of the Ministry of Food and Agriculture. As the Food and Agriculture Commission is already seized of the task and a specialist (Mr. Hardine) has been invited to examine this question, I have requested the President to defer the consideration of the recommendations of the Re-organization Committee till the end of January, 1960, so far as they relate to this Ministry, by which date it may be possible for the Commission to complete their examination. I shall be grateful if the Commission can submit their recommendation by the end of January, 1960.

3. The Ministry is being asked to forward to the Commission a copy of the recommendations of the Re-organization Committee together with the comments of the Ministry thereon.

Yours sincerely,

Sd/

M. H. Rahman,

Malik Amir Mohammad Khan,
Nawab of Kalabagh,
Chairman, Food and Agriculture Commis:
Government of Pakistan,
C/O P. I. D. C. House,
Kutchery Road,
Karachi.

No. F.33-C&C/59,
Government of Pakistan
Ministry of Food & Agriculture
(Agri. Division)

Karachi, dated the 7th October, 1959.

OFFICE MEMORANDUM

Subject - Expansion of Cotton Production (Textile Industry).

The undersigned is directed to forward herewith a copy of extract from the Decision of the Economic Committee of Cabinet in case No. 62/LCM/59, on the above subject with the request that the question of increasing cotton production to 2.5 million bales during the next plan period may kindly be examined immediately and a Interim Report submitted to this Ministry by the 15.10.59 is possible.

Sd/--Mohd Moud Khan
Section Officer,
Government of Pakistan.

To

Food and Agriculture Commission,
Karachi.

.....

Copy of extract from the Decision of the Economic Committee of the Cabinet in case No. 62/ECM/59.

ECONOMIC COMMITTEE OF THE CABINET FURTHER DECIDED

(a)

XXXXX

XXXXX

XXXXX

XXXXX

(b)

The Food and Agriculture Commission should be requested to examine urgently the question of expansion of cotton production to 2.5 million bales during the next plan period and to give Interim Report on this subject. As soon as the Interim Report became available a departmental working party should be set to examine the Report quickly and to recommend adoption of concrete measures in order to ensure attainment of the desire expansion in cotton production.

XXXX

XXXXX

XXXXX

XXXXX

TABLE I

APPENDIX III

WHEAT POSITION IN WEST PAKISTAN

Year	Carry Over	Production	Import	Procurement	Consumption (2+3+4-7 columns)	Tons Closing balance
						7
						16,000
						19,500
						60,000
						42,550
						95,130 (On 1-2-60)

TABLE NO. 2 APPENDIX III

WHEAT POSITION IN PAKISTAN

1	2	3	4	5	6	7
1955-56	187,200	31,62,000	109,000	375,000	34,33,200	25,000
1956-57	25,000	33,39,000	642,300	175,000	39,18,300	88,000
1957-58	88,500	36,06,000	769,500	252,200	42,43,000	221,000
1958-59	221,000	35,44,000	555,500	358,150	41,90,500	130,000
1959-60	130,550	38,65,000	534,400	553,000	-	-

Statement showing monthly arrivals of
wheat under various agreements.

.....

Month						(Tons)
	Under ICA Agreement	Under ICA Agree-ment	Under Colombo Plan Canada Australia		Under cash purchases Australia	Monthly Totals
Dec. '59	33,697	-	46,578	-	-	80,275
Jan. '60	50,589	-	9,200	-	11,100	70,889
Feb. '60	30,000 69,000*	-	8,222*	-	11,100) 15,300*)	133,622
Mar. '60	100,000	-	-	-	-	100,000
Apr. '60	66,714	34,000	-	11,000**	-	100,714
May '60	-	133,000	-	-	-	133,000
June '60	-	133,000	-	-	-	133,000
Total:	350,000	300,000	64,000		37,500	751,500
W. Pakistan						
E. Pakistan						
	50,000	50,000	-		-	
	400,000	350,000	64,000		37,000	

* Expected during February 1960

** As the date of delivery has not been fixed, this figure has not been included in calculation.

Note:

In addition, details of an agreement covering supplies from USA is in the process of finalization which would ensure the import of 550,000 tons and 450,000 tons during the financial years 1960-61 and 1961-62 respectively. These supplies may not begin to arrive before Sept '60. Further Pakistan will be purchasing from markets abroad from its own resources about 75,000 tons annually. There is also the possibility of further advantages under the Colombo Plan but that position is still indeterminate.

NOTE OF DISSENT OF MR. G. S. KEHAR, MEMBER,
ON THE INTERIM REPORT OF THE FOOD AND AGRICULTURE
COMMISSION.

.....

I regret I cannot agree to the creation of a separate board for price stabilisation because it will be an additional link in which instead of removing bottlenecks we will create more bottlenecks and it will work adversely against the interests of free trade which is the main objective of the present change of policy. In the present policy the Government have to procure from abroad foodgrains and keep reserve stocks of 5,00,000 tons. The internal distribution, the movement control, the price control and rationing is to be removed as a result of the above policy. The Government will only have to operate the reserves in case the prices are going beyond a certain level and will have to come to the market for the procurement of the foodgrains if the prices are going beyond the floor limits fixed. For that purpose a countrywide marketing intelligence will be required. If the new Price Stabilisation Board is set up it will mean that the major portion of the Food Ministry will continue to operate because Government will have to negotiate with foreign countries for the purchase and transport of foodgrains. This cannot be done by the proposed Board. The existing food organisations both at the Central and Provincial level have not been given sufficient financial and administrative facilities to fulfill the ideal conditions which are to be achieved by the creation of the new Board. Instead of creating the new Board, which will mean extra cost and unfettered authority with regard to pay scales, number of staff to be employed and freedom of decisions, if the same facilities are given to the Food Division of the Central Government as well as the Provincial Food Departments, in my opinion the existing organizations will be able to carry out their responsibilities more efficiently than the proposed Board.

2. The distribution of food is more connected with law and order and if this part is transferred to an autonomous Board, the Government will come under public criticism and not the Board. It is, therefore, necessary

APPENDIX VIDRAFT LEGISLATIONFOOD PRICE STABILISATION BOARD ACT 1960

Whereas it is necessary to set up an organisation for the provision of food for the people of Pakistan and for the stabilisation of prices of food-stuffs; and whereas in pursuance of this objective it is necessary to set up a Food Price Stabilisation Board to discharge Government functions for procuring importing and exporting food stuffs, to arrange for the storage and distribution and to watch on behalf and under the direction of the Government that prices remain within reasonable limits, it is hereby enacted:-

SECTION 1

- i) This act may be called 'The Pakistan Food Price Stabilisation Board Act, 1960'.
- ii) It shall extend to the whole of Pakistan.
- iii) It shall come into force on such a date as the Central Government may by notification in the official gazette fix.

SECTION 2.

In this Act unless the context otherwise requires:

- (a) 'Board' means the Food Price Stabilisation Board of Pakistan.
- (b) 'Government' means the Government of Pakistan;
- (c) 'Foodgrains' means food-stuffs including foodgrains, and any other agricultural produce notified by Govt. as such in the gazette.
- (d) 'Prescribed' means prescribed by Central Government in accordance with the provision of this Act.

SECTION 3.

- (a) With effect from such date as the Central Government may, by notification in the gazette, fix in this behalf there shall be established, a Board by the name of 'Food Price Stabilisation Board of Pakistan' which shall be a body corporate having perpetual succession and a common seal with power to acquire, hold and dispose of property and to contract, and may, in the said name, sue and be sued.
- (b) The Board shall consist of the following Directors who will be nominated by the Government.
- (c) 1. Chairman who shall be in a semi. or Govt. service or non-official.

There will be 9 Directors representing each of the following

interests.-

1. Growers.
2. Consumers.
3. Trade.
4. Foodgrains Milling Industry.
5. State Bank.
6. 7. Two Directors each representing Departments handling food in East and West Pakistan Governments.

8 - 9. One representative each of the Central Ministry of Food & Agriculture and Ministry of Finance.

One of these Directors shall be appointed as the Chairman.

The Chairman and at least two other Directors will be paid Directors.

SECTION 4

- i) The Chairman and the Directors shall hold office for a period of 3 years but they may be reappointed.
- ii) A Director of the Board may resign his office by giving notice to Government and on such resignation being accepted he shall be deemed to have vacated his office.
- iii) Government may, at any time, remove from office any of the Directors.

SECTION 5.

- a) The Board shall meet at such times and place and shall subject to the provisions of sub-section (ii) and (iii), observe such procedure in regard to transaction of business at his meeting as may be provided by the regulations made by the Board under this Act, provided that the interval between two meetings will not exceed 3 months.
- b) The quorum of the meeting shall be four.
- c) The Chairman or in his absence any member chosen by the members present from amongst themselves shall preside at a meeting of the Board.
- d) All questions at a meeting of the Board shall be decided by majority of the votes of the members present and voting and in case of equality of votes the person presiding shall have a second or casting vote.

SECTION 6.

1. Subject to such rules as may be made by the Government in this behalf, the Board may appoint such officers and employees as it considers necessary for the efficient performance of its functions.

2. The method of appointment, the conditions of service and the scales of pay of the officers and other employees of the Board shall be such as may be determined by regulations made by the Board.

SECTION 7.

Subject to the provisions of the Act, the function of the Board will be:-

- a) To watch and stabilise foodgrain prices within limits fixed by Government through procurement, sales, distribution, handling and storage and, if necessary, import and export of foodgrains and other foodstuffs for or on behalf of the Govt. and with the permission of Government for any other agency. The Board will keep the food reserves on behalf of Government.
- b) To acquire, maintain, construct and operate storage, godowns and warehouses at such suitable places as it thinks fit.
- c) To develop a system of warehousing and assist in the operation of warehouses by other Government and non-Government agencies.
- d) Study and advise government and other agencies in respect of improved food storage and handling methods.
- e) Maintain suitable market information service to keep itself and Government informed of the trend in foodgrain prices to operate in the market to stabilise prices in the country as a whole or any part thereof.
- f) Assist Government in maintaining the grades and standards of foodgrains, their processing and milling.
- g) To keep liaison with similar Boards in other countries of the world.
- h) Assist cooperative organisations in handling and marketing foodgrains and foodgrain products.
- i) Any other function entrusted by the Government.

SECTION 8

1. The Chairman and the two wholetime Directors shall form the Executive Committee of the Board with such other Directors whom the

Board may nominate from time to time.

2. Chairman of the Board shall be the Chairman of Executive Committee.

3. Subject to such general or special directions as the Board may, from time to time, give, the Executive Committee shall be competent to deal with any matter within the competence of the Board.

4. The Executive Committee shall meet at such time and at such places and shall observe such procedure in regard to transactions of its business as may be provided by regulations approved under this Act.

5. The quorum for a meeting shall be two.

6. The decisions of the Committee will be in accordance with the provisions of section v(d) of the Act.

7. Minutes of every meeting of the Executive Committee shall be laid before the Board at its next following meeting.

The decision of the Board shall be final.

SECTION 9.

The Government may:

- a) pay to the Board in initial non-recurring grant of Rs. 50 lakhs for meeting its current expenses.
- b) place such sums of money at the disposal of the Board as may be required for the construction of permanent grain storage accommodation.
- c) pay such sums of money that may be needed for discharging any additional responsibility entrusted to the Board by Government from time to time.
- d) arrange for payment through grants or loans or reasonable rates of interest for carrying out the operations on purchase distribution and storage of foodgrains.

SECTION 10.

The Board may with the approval of the Government levy a surcharge on all or any of the foodgrains handled by it from time to time to meet

its recurring expenses and for the maintenance of the storage accommodation.

SECTION 11.

The Board shall maintain a reserve fund and an equilisation fund for carrying out its operations and to cover itself against unforeseen losses. The fund may be used with the permission of Governments, as a part of a price equilisation fund.

SECTION 12.

1. The Board shall furnish to government at such times and in such form and manner as may be prescribed or as the Government may direct such returns and estimates and such particulars in regard to the discharge of its functions under this Act as the Govt. may, from time to time, require.
2. Without prejudice to the provisions of sub-section I, the Board shall as far as possible at the end of each year submit to the Government a report in such form and manner and on such date as may be prescribed giving a true and full account of its activity, policy and performance during the previous years.

SECTION 13.

1. In the discharge of its functions, the Board shall be guided by such instructions on questions of policy as may be given to it by the Government.
2. If any dispute arises between Government and the Board as to whether a question is or is not a question of policy, the decision of the Government shall be final.

SECTION 14.

The Board may, with the approval of Government borrow money for the purpose of carrying out its functions through the State Bank of Pakistan, against Government securities or any other securities and stocks held by it and issue and sell bonds and debentures carrying interest for the purpose of raising funds in the manner prescribed by Government.

SECTION 15.

All money belonging to the Board shall be deposited in the State Bank of Pakistan, a Government Treasury or in a scheduled bank.

SECTION 16.

1. The Board shall maintain proper accounts, including commercial accounts and other relevant records and prepare an annual statement of accounts in such form as may be adopted by the Board with the approval of Government.
2. The account of the Board shall be audited annually by the Accountant General of Pakistan or any persons authorised by him in this behalf and also by Commercial auditors.
3. The Accountant General of Pakistan or any person authorised by him in connection with audit of accounts of the Board shall have the same rights, privileges and authority as in connection with the audit of Government accounts and in particular shall have the right to demand the production of books, accounts, vouchers, and other documents and papers and inspect any office of the Board.
4. The accounts of the Board as certified by the Accountant General of Pakistan or any other person authorised by him in this behalf together with an audit report shall be forwarded annually to Govt.
5. The Board may arrange to have the accounts and books of any warehousing organisation or any other agency recognised by the Board audited with regard to sufficiency of the procedure of maintaining accounts.

SECTION 17

No Act or proceeding of the Board shall be invalid by reasons only of the existence of any vacancy among its members or any defect in the constitution thereof.

SECTION 18.

The Directors of the Board shall be indemnified by the Board against all claims filed and expenses incurred in the discharge of his

~~duties except such as caused by his own wilful act or default.~~

SECTION 19.

The Board may be liquidated by the order of and in the manner decided by Government. In the event of the Board being wound up assets and liabilities, interests and holdings will vest in the Central Government.

SECTION 20.

The Government may, by notification in the gazette make rules to carry out the purpose of this Act without prejudice to the generality of the foregoing power such rules may provide for:-

- a) The manner of filling vacancies among the Directors,
- b) The appointment of officers and other employees of the Board,
- c) The returns, statements and other particulars in regard to the discharge of its functions to be furnished by the Board to Govt.
- d) The form and manner in which and the times at which the Board shall submit a report of its activities to the Government,
- e) The form and manner in which the annual statement of accounts shall be prepared by the Board.

SECTION 21.

1. The Board, with the previous sanction of the Government by notifying in the Gazette, make regulations not inconsistent with this Act and the rules made therein to provide for all matters for which provision is necessary or expedient for the purpose of giving effect to the provisions of this Act.

2. In particular and without prejudice to the generality of the foregoing power, such regulations may provide for;

- a) the procedure to be followed by the Board and its Executive Committee in regard to the transaction of their respective business;
- b) the methods of appointment, the conditions of service and the scales of pay of the officers and other employees of the Board
- c) procedure to be followed in regard to the transaction of business of warehousing.

APPENDIX VIIACTION PROGRAMME FOR FERTILISER USE ON THE
RICE CROP 1960-61 IN EAST PAKISTANI. Basis of the Programme

Simple fertiliser trials in cultivators' plots on three paddy varieties of East Pakistan (aman, aus and boro) conducted over the year 1957 to 1959 covering the different soil-climate tracts of the region have shown without doubt the high responsiveness of the paddy crop to fertiliser application. These trials have also demonstrated the superiority of combined use of nitrogenous and phosphatic fertilisers over single-nutrient carriers both from the point of view of increased yield and economics over a large area of the province, though in some tracts such as Teesta, Barind and Madhupur, combination of N. P. & K carriers has given better results. Considering, however, the facts that the latter area is not large in size and also not intensively cropped with paddy and also that trials with potassic fertilisers have been conducted in limited areas and in one year only, the immediate next stage in the expansion of a fertiliser programme on rice in East Pakistan will lie in making an all out drive for the use of N-P combinations as extensively as possible. A more balanced fertiliser programme including photassium has obviously to be brought in at a later stage when confirmatory evidence would be available in its favour. with a more precise definition of the zones or areas where it is most suitable and economical and when the cultivators also would get used to the techniques of multiple application and home-mixing of fertilisers or when mixed fertilisers will be available.

The basis of the extended programme is obviously the findings of the rapid soil fertility survey carried out in East Pakistan but since in an intensive fertiliser programme as envisaged here it is very important that actual recommendations to the cultivators for a large scale fertiliser use in point of its kind, dose, method and time should be such as will reduce the chances of failure to the very minimum, I

would like to point out here certain lacuna that, to my mind, exist in the East Pakistan trials. Though we may overlook them or adapt them to some extent for our immediate programme it will be necessary to clarify them before the programme enters its second phase.

(a) Nitrogen Dose and Organic Manure Combination

The question of use of organic manures particularly cowdung along with artificials is an important one. There can be no two opinion that organic manures are not substitutes for artificial fertiliser s. From various considerations it is, however, desirable that it should be used as a supplement to artificials. The degree to which it can effectively serve this purpose is, however, limited by its availability. However, there is a campaign going on at present for making the cultivator conserve more of the farmyard manure and return it to his land and also use it liberally as a supplement to artificial fertilisers. Here comes in the question of dose of nitrogenous fertiliser, which is not adjusted for the organics used may easily lead to an over-dose of nitrogen resulting in lodging and other undesirable effects specially in rice. In my opinion, the dose of 40 lbs of N per acre as used in these trials is somewhat above the optimum and that 30 lbs. would perhaps have given equally good, if not better results at least in single applications. Granting that combination of P & K may push the nitrogen-optimum above 30 lbs, possibly to 40 lbs, further addition of N in the form of, say cowdung, may produce adverse results. It may also be mentioned here that the results obtained by combining cowdung to get half of the total nitrogen dose of 40 lbs. from it are not so reliable and the conclusions derived from them are also rather vague. The statements made in the report as to its superiority over the all-artificial N - P treatment are contradictory and not borne out by data. Besides, cowdung being of variable composition, which is made further variable due to varying conservation practices, storage conditions and moisture content at the time of use, and no analysis having been made of the samples prior

to their use in the different centres, the results obtained are not comparable and trustworthy. Its content of P & K have not also been accounted for. Even if the cowdung treatment is taken to be as good as (and not superior to as stated) the all artificial combination and is recommended for adoption, it will not be possible for the cultivators to apply 50 mds. of cowdung per acre (assuming .5 percent N content). From these considerations I would suggest a recommendation for 30 lbs. N from artificial + 10 lbs. of N from cowdung (25 mds. per acre) + 40 lbs. P 2⁰⁵ from artificial. While this will keep the cowdung in the picture, the total nitrogen dose will also be limited to 40 lbs. Even if the above quantity of cowdung is not used in some cases or less amount used, 30 lbs N in itself is likely to give satisfactory results. (I would suggest future trials to be laid out on this basis.)

(b) Time and Frequency of Application

Time of fertiliser application is important. While phosphatic and potassic fertiliser are used at the time of sowing or transplanting, nitrogenous fertilisers are known to be more beneficial to the rice crop when applied about 3 weeks after sowing or transplantation and to give still better results when half of it is applied at transplantation or sowing and another half about 3 weeks later. On the basis of past trials and experience in East Pakistan, the usual recommendations were for split applications and when this was not done for applying the whole quantity about 3 weeks after transplantation. In West Pakistan trials also the latter method seems to have been followed. As far as is known either of these two methods is in vogue in other rice growing countries of South East Asia. Unfortunately, however, in Dr. Islam's latest report presented to the International Rice Commission (Ceylon) it is stated that 'for aus crop fertilisers were applied broadcast at the time of sowing' and 'for aman and boro crop the fertiliser was applied at the time of puddling the field for seedling transplantation'. In one of his earlier reports giving the results of aman paddy of 1957-58 he states that 'ammonium sulphate

was applied broadcast 3 weeks after transplantation' whereas in his another report on aman paddy of 1958-59 he states that 'fertilisers were applied at the time of puddling before transplantation of seedlings'. The position is thus quite confusing. (I have referred this to Dr. Verma for clarification). If the fertiliser was applied at the time of sowing or transplantation, it was not the quite correct thing to do from various physiological and environmental considerations. It may be held that if the application was properly timed still better results could have been obtained. Since the present fertiliser programme is going to provide the foundation for a future build-up we should introduce at this point such practices as are scientifically sound and practicable, so that there may not be too frequent change-overs to new recommendations. I am, therefore, of the opinion that we should recommend in this programme a divided application of the nitrogen. The actual recommendation would be:

(i) 40 lbs P_2O_5 + 15 lbs N + 25 mds. cowdung, all at the time of sowing or transplanting.

(ii) 15 lbs N, about 3 weeks after sowing or transplanting.

Artificial fertilisers available in East Pakistan for the next year's rice crop are urea and triple superphosphate only. Since both triple super and urea contain about 46 percent of P_2O_5 and N respectively, if one lb of P_2O_5 is replaced by one seer of super and one lb of N is replaced by one seer of urea, the total dose of P_2O_5 and N is reduced in each case by only 2 lbs per acre. This is immaterial particularly because 40 lbs dose is rather on the high side but it will have the advantage of prescribing a quantity in the cultivator's own term of weight. The recommendation can thus be simplified as follows:

(i) At the time of sowing or transplantation, apply 1 md of triple super and 15 seers of urea and 25 mds. of cowdung.

(ii) After about 3 weeks of sowing or transplantation, apply 15 seers of urea.

II. SIZE OF THE PROGRAMME

In determining the size of the programme, besides the immediate

objective of boosting up food production through fertiliser use and popularisation of fertiliser, the fact that the fertiliser factory at Sylhet will start producing 117,000 tons of urea annually from 1961-1962 at the latest should be taken into account. Unless the 1960-61 programme is of substantial magnitude and its impact is heavy enough it will hardly be possible to consume this fertiliser locally by that date. The urea equivalent of nitrogenous fertilisers used in East Pakistan during the last 9 months from April to December, 1959 (obtained from Fertiliser Controller, East Pakistan on telephone) comes to about 11,500 tons. Super-phosphate consumed during this period is 1100 tons. Taking an average monthly consumption of about 1,000 tons of urea during the next 3 lean months the total for the year would not exceed 15,000 tons of nitrogenous fertiliser in terms of urea, which is much below the performance required to match the production in 1961-62. It is, therefore, necessary that the next year's programme should be raised to 4 to 5 times of this level and subsequently the process is accelerated not only to consume all of the local fertilisers but to build up a programme leading to the use of fertilisers in all fertilisable land, if not by the end of the Second Five Year Plan, by the middle of the Third Five Year Plan. From this point of view the next year's target may be so fixed as to apply fertiliser in 15 percent of the fertilisable paddy land. Subsequently in each year a further 15 percent of land may be brought under fertiliser use so that in the last year of the Second Five Year Plan fertiliser is regularly used at least on 75 percent of the responsive area. The size of the programme is calculated below. Since urea and tripel super are the materials that are going to be used in East Pakistan in the coming years the figures are expressed in terms of these materials instead of Ammonium Sulphate equivalent, etc.

AMAN RICE - 1960

Total acreage under aman paddy (average of last 10 years) is roughly 14 million acres. One fourth of this area may be taken to be under

broadcast aman grown in low lying areas which do not either require fertiliser or it is otherwise uneconomical. Roughly 10 million acres will, therefore require fertiliser application. For a coverage of 15 percent 1.5 million acres have to be brought under fertiliser use which at the rate of 30 seers per acre will need 42,000 tons of urea.

The use of superphosphate is not as popular as sulphate of ammonia or urea with the cultivators. Besides combinations have not been tried by them so far in any appreciable extent. It may, therefore, be assumed that with the utmost effort 50 percent of the target area i. e. 750,000 acres would receive the combination. At the rate of 1 md per acre the requirement of triple super would thus come to 28,000 tons. Since some of this requirement will be met from locally produced bone-meal it may be planned to use 25,000 tons of triple super for the aman crop.

FOLLOW-UP IN AUS, 1961

The campaign with the aman crop will lose much of its value and impact if a similar drive is not maintained in the following aus crop which has given equally satisfactory response to fertilisers. The average area under aus is 5.5 million acres. The ratio of high land to low land acreage is roughly 2 to 1 and it is considered that only high land aus is likely to give satisfactory results from fertiliser use. For a coverage of 15 percent of 3.6 million acres of high land aus we have to programme for roughly 540,000 acres which will need 15,000 tons of urea and 10,000 tons of triple super assuming half the area to be put under combination as before.

OTHER CROPS

For other crops like sugarcane, jute, vegetables, etc. the fertiliser requirement may not exceed 6,000 tons of urea and 3,000 tons of triple super.

TOTAL FERTILISER PROGRAMME FOR 1960-61

The total fertiliser programme for 1960-61 will thus stand as follows:-

	<u>UREA</u>	<u>TRIPLE SUPER</u>
Aman	42,000 tons	25,000 tons
Aus	15,000 tons	10,000 tons
Other crops	6,000 tons	3,000 tons
Total	63,000 tons	38,000 tons

Planning Commission's programme for 1960-61 is 110,000 tons of Ammonium Sulphate equivalent (49,000 tons of urea equivalent) and 10,000 tons of super. The East Pakistan Government have indicated their 1960-61 requirements for crops other than tea as 55,000 tons of urea and 17,500 tons of triple super. Both these estimates fall short of the programme outlined here.

III. AVAILABILITY AND IMPORT

Special Officer, Fertiliser, Ministry of Agriculture estimates that on 1st July, 1960, East Pakistan will have a carry over of 29,000 tons of urea and 10,000 tons of triple super. This accounts for import and estimated distribution during the period January-June, 1960. As per aman programme 21,000 tons of urea will be required in August-September 1960 when transplantation is done. The carried over stocks will meet this demand. For the second application in September-October 1960, the additional 13,000 tons of urea must move into the thana stores in August. Similarly additional 15,000 tons of super (25,000 - 10,000 tons) should be in the stores in July, 1960. In order that the fertiliser is available to the cultivators in time and to avoid handling in the rainy months it will be necessary to make provision for import of these 32,000 tons (16,000 tons urea and 16,500 tons super) within the current fiscal year i. e. by June, 1960 and the Ministry of Agriculture is to be requested to take immediate steps in this respect. 25,000 tons of fertilisers for the aus crop may be imported in January, 1961 as it will be required to be applied in April-May, 1961. 9,000 tons required for other crops may be imported in two lots half in June, 1960 and half in January, 1961.

Summing up, the fertiliser import has to be timed as follows, if the programme is to succeed:-

	<u>Urea (tons)</u>	<u>Super (tons)</u>
Carry-over, 1st July, 1960.	29, 000 (aman)	10, 000 (aman)
Import by June, 1960. (a)	13, 000(aman)	15, 000 (aman)
(b)	3, 000(other crops)	1, 500 (other crops)
Import by January, 1961. (a)	15, 000 (aus)	10, 000 (aus)
(b)	3, 000(other crops)	1, 500(other crops)
	<u>63, 000(all crops)</u>	<u>38, 000(all crops)</u>

IV. STORAGE

To handle the amount of fertilisers envisaged the storage capacity particularly at the lower level will have to be enlarged considerably. The greatest pressure on storage will be in the months of June-July when the carry-over and the import totalling about 62, 000 tons will have to be stocked and handled. The present storage capacity with the Agriculture Department is about 65, 000 tons - 9, 000 tons in Chittagong port, 40, 000 tons at districts and regional godowns and 16, 000 tons in the thana seed stores. This capacity includes storage for seed and pesticides as well. The port and district stores feed the thana stores from where actual distribution takes place and this is the point where the storage position appears extremely weak. For the success of the programme the storage at thana and lower levels have to be strengthened. It will be necessary to have fertiliser depots in each union so as to make it available to the cultivators. I suggest that thana storage capacity should be doubled and arrangements made to have atleast a 10 tons capacity depot in each union which may be provided by Union Councils on rental basis. This will give an additional capacity of 16, 000 tons at thana level and 40, 000 tons at Union Levels. If movement from the port to district godowns and from there to the thana stores is smoothened and accelerated the expanded storage facilities should ordinarily meet the demand of the programme.

V. CREDIT

The programme is based on the assumption that fertiliser on 50 percent subsidy will be made available to the cultivators on credit

and no difficulty will be put in the way of their getting it easily and quickly as and when required.

VI. ORGANISATION

The programme will require a concerted and vigorous drive not only on the part of the Agriculture and Village Aid Departments but also other nation building departments having their staff stationed at sufficiently low levels. National Development Organisation and the Basic Democracy Councils will have to lend their full weight to the programme. The 4,000 Union Agricultural Assistants will be in a position to devote their full time now since jute licencing is being abolished. To create and disseminate publicity materials for this 'use more fertiliser campaign' Agriculture Department may have to have a separate publicity cell at the Headquarters for this specific purpose. The staff for storage and handling will have to be sufficiently increased and it may be necessary to post extra staff at the thana level for taking charge of the programme atleast during the rush season. Along with the fertiliser use other recommended practices such as Japanese method should be extensively publicised and adequate arrangements made to control pests and diseases. It is hoped that the Provincial Government will plan the details of the operations with vision and foresight and see that this programme is carried out successfully.

Sd/-
(M. O. Ghani)
25-1-1960

APPENDIX V
ITINERARY OF THE COMMISSION

Itinerary of the Commission

16th July, 1959.

Inauguration of the Commission - Address by the Minister for Food and Agriculture.

20th - 24th August, 1959

Meetings of the Commission at Karachi.

29th August - 13th September, 1959.

Tour of West Pakistan - Visit to :-

- 1) Ghulam Mohammad Barrage.
- 2) Agricultural College Tandojam.
- 3) Agricultural College and Research Institute, Village-AID Institute and Farms at Lyallpur.
- 4) Soil Conservation Project near Rawalpindi.
- 5) Sugarcane and Fruit Farms, Peshawar and Mardan.
- 6) Range Farm & Soil Conservation Project near Kalabagh.
- 7) Cooperative Farms near Multan.
- 8) Collection of data and discussions with Officials and local Zamindars at above places.

12th - 15th October, 1959. Meetings of Commission at Karachi.

20th October - 3rd November, 1959.

Tour of Foreign Members and Advisers to West Pakistan - Visit to:-

- 1) Agricultural Farms, Animal Husbandry College in and around Lahore.
- 2) Agricultural College, Farm & Village-AID Institute, Lyallpur.
- 3) Agricultural development work in Thal area.
- 4) Range farm and soil reclamation work near Kalabagh.
- 5) Cooperative farms near Multan.
- 6) Discussions with local officials and cultivators at above places.

12th - 16th November, 1959. Tour of the Commission to Quetta - Visit to

- 1) Agricultural Farms.
- 2) Forest Projects.
- 3) Discussions with local officials and zamindars.

3rd - 9th December, 1959

Tour of the Commission to East Pakistan - Visit to:-

- 1) Village-AID Institute, Japanese Rice Cultivation Area. Ganges Kobadak Project Area. Coconut plantations in & around Khulna.
- 2) Agricultural Institute Dacca. Discussions with Governor, Martial Law Administrator, Chief Secretary, Director General of Food & Agriculture, & Members Board of Revenue.

10th - 14th December, 1959

Commission divided in 3 Groups each visited:-

- 1) Agricultural Farms in Sylhet Area & places where arrangement of potatoes import from India through Sylhet border is made.
- 2) Veterinary College & Agricultural Farm at Mymensingh & Gauripur. Discussions with cultivators.

- 3) Agricultural Farm and tobacco cultivation in Rangpur. Discussions with officials and growers.

15th-21st December, 1959

Visits of the full Commission to:-

- 1) Ganges Kobadak Project, and Kaptai.
- 2) Fisherman's Cooperative Society, Agricultural Farm near Chittagong.

Discussions with local officials, cultivators, and villagers.

Also visited village markets (HATS) to see marketing of agricultural produce.

3rd-14th January, 1960

Members attended the meetings of the Panels at Lahore set up by the Commission.

29th January-11th February, 1960

Meetings of the Commission at Karachi to finalize the Interim Report.

4th-17th February, 1960

Members attended the meetings of Panels at Dacca.

20th February-9th March, 1960

Tour of West Pakistan-Visit to:-

- 1) Reclamation Project, Churkana.
- 2) WAPDA Projects near Lahore.
- 3) Agricultural Farm at Wan Radha Ram.
- 4) Renala Khurd Farm.
- 5) Agricultural Farm Rawalpindi.
- 6) Soil Conservation Projects, Hasanabdal and Texila.
- 7) Forest Projects at Ghora Galli.
- 8) Sugar Beet Cultivation near Mardan.
- 9) Warsak Dam Project.
- 10) Sheep Breeding Centre, Jehangirabad.
- 11) Cooperative Farms near Multan.

Discussions at above places with officials and non-officials.

9th-21st April, 1960

Tour of East Pakistan-Commission divided into 4 Groups and visited Thanas and Villages in Mymensing, Dinajpur, Khushtia, Bogra, Chittagong and Jessore districts.

Interviewed individually

- 1) District Magistrates.
- 2) Revenue Officers.
- 3) Deputy/Assistant Directors of Agriculture
- 4) Agricultural Assistant/Union Assistant/Mukaddams.
- 5) Village-AID Divisional Officers and Workers.
- 6) Assistant Registrar Cooperative Societies, representatives of Cooperative Banks, and A.D.F.C.
- 7) Animal Husbandry Officers.
- 8) Cultivators.

Also visited village seed and fertilizer godowns, offices of Union Assistants, holdings of the farmers etc.

2nd - 13th May 1960

Tour of West Pakistan - Divided into 5 Groups, visited villages and tehsils in Rahimyar Khan, Nawabshah, Mirpur Khas, Larkana, Lyallpur, Jhelum, Gujranwala, Sialkot and Mardan districts. Interviewed individually:

- 1) Deputy Commissioners.
- 2) Revenue Officers.
- 3) Deputy/Extra Assistant Directors of Agriculture.
- 4) Deputy/Assistant Registrars, Cooperative Societies.
- 5) Animal Husbandry Officers.
- 6) Representatives of A. D. F. C.
- 7) Agricultural Assistant/ Plant Protection Assistant/ Mukaddams.
- 8) Divisional Officers Village-AID & Workers.
- 9) Zamindars/Cultivators/Haris.

Also visited seed/fertilizer stores/officers of Agricultural Assistants etc.

14th - 31st May, 1960

Members attended Panel Meetings held in Karachi.

13th June - 1st July, 1960

Meetings of the Commission at Lahore.

20th - 24th July, 1960

Meetings of the Commission at Lahore.

9th August, 1960

Meetings of Commission at Karachi.

22nd - 28th August, 1960

Meetings of Commission at Quetta.

4th - 6th September, 1960

Meetings of the Commission at Lahore.

22nd - 24th September, 1960

Meetings of the Commission at Lahore.

18th-21st November, 1960

Meetings of the Commission at Lahore - Report finalized.

29th November, 1960

Presentation of the Commission's Report to the President at Karachi.

APPENDIX VI

COMPARATIVE STUDY OF PAY SCALES IN
VARIOUS DEPARTMENTS

Table 6.1

Comparative Study of the Pay Scales of the posts of
teaching staff of the various Colleges in Pakistan.

Post	Province	Agriculture College	Animal Husbandry College	Engineering College	Medical College (King Edward Medical College)
		Rs.	Rs.	Rs.	Rs.
Principal	West Pakistan	600-1150 S. P. Rs. 150/- p.m.	600-1150 plus S. P. Rs. 150/-p.m.	1700/-plus S. P. Rs. 300/-p.m.	1000, - 1500 plus S. P. Rs. 200/-p.m.
	East Pakistan	350-1050	350-1050	Rs. 1700/-plus S. P. Rs. 350/- p.m.	
Professors	West Pakistan	600-1150	600-1150	1200-1500	Rs. 1000-1500 plus non-practice allowance Rs. 200/-p.m.
	East Pakistan		350-1050		
Assistant Professors	West Pakistan	250-750	250-750	600-1150	Rs. 600-1150 plus N. P. A Rs. 200/-
	East Pakistan			600-1150	
Lecturers	West Pakistan	200-350	200-350	250-750	
	East Pakistan	200-500	250-750		
Demonstrators	West Pakistan	200-350	200-350	250-750	Rs. 250-750 plus N. P. A. Rs. 150/-p.m.
	East Pakistan	200-500	250-550		

Table 6.2

Comparative Study of Pay Scales of Officers of the Various Departments in East and West Pakistan

S.No.	Department	East Pakistan		West Pakistan	
		Designation	Pay Scales	Designation	Pay Scales
			Rs.		Rs.
Agriculture	i) Director-General Food & Agriculture	CSP scale		i) Director of Agriculture	1400-1700 plu Rs. 300/- p. m. as S. P.
	ii) Director of Agriculture	1300-1600		ii) Joint Director of Agriculture	600-1150 plus Rs. 250/- p. m. as S. P.
	iii) Dy. Director of Agriculture	350-1050		iii) Dy. Director of Agriculture	600-1150 plus Rs. 150/- p. m. as S. P.
	iv) Asstt. Director of Agriculture	250-750		iv) Extra Asstt. Director of Agriculture	250-750
	v) Sub-divisional Agricultural Officer	a) 200-500 (B. Sc. Agr.) b) 100-200 (non-degree incumbents)		v) Agriculture Assistant	200-350
Cooperation	i) Registrar	CSP officer		i) Registrar	700-1300 plus Rs. 300/- p. m. as S. P.
	ii) Jt. Registrar	do-		ii) Jt. Registrar	
	iii) Dy. Registrar	East Pakis- tan Civil Service Scale plus 150/- p. m. as S. P.		iii) Dy. Registrar	600-1150
	iv) Asstt. Registrar	250-750		iv) Asstt. Registrar	250-750

1	2	East 3 Pakistan	West 4 Pakistan
		Rs.	Rs.
	v) Inspector	160-350	v) Inspector 120-300
Animal Husbandry	i) Director of Livestock Services	2000/-p.m. consolidated.	i) Director 1400/- plus Rs. 300/-p.m. as S.P.
	ii) Deputy Director	350-1050	ii) Regional Deputy Director 600-1150
	iii) Asstt: Director	250-750	iii) Asstt: Director 250-750
Forest	iv) Chief Conservator	Scale not yet fixed	iv) Chief Conservator 1400 -1700 plus Rs. 300/-p.m. as S.P.
	ii) Conservator	1300-1600	ii) Conservator Rs. 1400/-p.m. fixed
	iii) Divisional Forest Officer	350-1050	iii) Divisional Forest Officer 350-1000
5. Fisheries	i) Director	1150-1400	i) Director 1250-1500
	ii) Dy: Director	350-1050	ii) Asstt: Director 350-850
	iii) Asstt: Director	250-750	iii) Extra Asstt: Director 250-750
	iv) Distt: Fisheries Officer	170-400	iv)
	v) Fisheries Overseer	90-200	v) Asstt: Warden 120-300
6. Irrigation			i) Chief Engineer Rs. 1700/-p.m. fixed
			ii) Dy: Chief 1250-1500 plus 200/-p.m. as S.P.
			iii) Supdg. Engineer 1250-1500
			iv) Ex: Engineer 600-1150 plus Rs. 50/-As. Technical Pay
			v) Sub-divisional Officer 250-750
			vi) Senior Overseer 185-350
			ii) Overseer 120-300

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8. Revenue

i) Administrator	Rs. CSP officer in his own scale plus Rs. 300/-p.m. as S.P.
ii) Dy. Administrator	CSP/PCS officer in his own scale plus Rs. 200/-p.m. as S.P.
iii) Director	CSP officer in his own scale plus Rs. 250/-p.m. as S.P.
iv) Dy. Director	300-850 plus Rs. 100/-p.m. as S.P.
v) Development Officer	250-750
vi) Supervisor	a) 200-350 for B.Sc(Agr) b) 150-250 for B.Sc (Animal Husbandry)
i) Member Board of Revenue	3500/-p.m. (fixed)
ii) Commissioner	3000/-p.m. (fixed)
iii) Deputy Commissioner	700-1300 plus Rs. 150/-p.m. as S.P.
iv) Revenue Assistant	300-800
v) Tehsildar	200-440
vi) Naib Tehsildar	130-250

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