



ANNEXURES

ANNEXURE I: QUESTIONNAIRE FOR RAPID FERTILIZER USE ASSESSMENT

Farmer Name ----- Village Name -----
 Tehsil Name ----- District ----- Land size (acre) -----
 Contact Number ----- Major crop(s) -----

Fertilizer Use (bags/acre)

Crop	Nitrogen		Phosphate				Potash		Micronutrients		Other
	Urea	CAN	DAP	MAP	SSP	NP	MoP	SoP	Zinc Sulfate	Boron	*Organic sources
Wheat											
Rice											
Cotton											
Sugarcane											
Maize											
Other											

*Farmyard Manure/Green Manure/Crop Residue incorporation (if any)

Irrigation Sources

Irrigated					
Canal	<input type="checkbox"/>	Tube well	<input type="checkbox"/>	Rainfed	<input type="checkbox"/>

Laboratory Analysis (prior to sowing)

Soil Test	<input type="checkbox"/>	Water Test	<input type="checkbox"/>
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Yield (Maunds/acre)

Wheat	Rice	Cotton	Sugarcane	Maize	Other

Satisfied with commodities price

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
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Major Problems

Water-logging	<input type="checkbox"/>	Salinity	<input type="checkbox"/>	Sodicity	<input type="checkbox"/>	Others	<input type="checkbox"/>
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ANNEXURE II: NUMBER OF SOIL SAMPLES FROM DIFFERENT DISTRICTS ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

Farm Advisory Center	Districts	Number of Samples	Farm Advisory Center	Districts	Number of Samples	Farm Advisory Center	Districts	Number of Samples
BAHAWALPUR	Bahawalnagar	9,078	MULTAN	DG Khan	9,201	SHAHKOT	Khanewal	14
	Bahawalpur	4,335		Faisalabad	1,226		Khushab	2
	Chakwal	30		Gujranwala	4,873		Lahore	68
	DG Khan	70		Gujrat	106		Layyah	12
	Faisalabad	1		Hafizabad	526		Lodhran	10
	Gujranwala	131		Jhang	224		Mandi Bahauddin	18
	Hafizabad	262		Kasur	380		Mianwali	114
	Jhelum	160		Khanewal	5,166		Multan	26
	Kasur	4,434		Khushab	11		Muzaffargarh	45
	Khanewal	44		Lahore	893		Nankana Sahib	894
	Lahore	485		Layyah	1,125		Narowal	7
	Lodhran	24		Lodhran	1,148		Okara	71
	Mandi Bahauddin	83		Mandi Bahauddin	16		Pakpattan	56
	Multan	71		Mianwali	8		Rahim Yar Khan	30
	Nankana Sahib	641		Multan	15,229		Rajanpur	26
	Okara	693		Muzaffargarh	59,437		Rawalpindi	75
	Pakpattan	356		Nankana Sahib	11,494		Sahiwal	136
	Rahim Yar Khan	2,312		Narowal	169		Sargodha	203
	Rajanpur	20		Okara	395		Sheikhupura	110
	Rawalpindi	97		Pakpattan	154		Sialkot	83
Sahiwal	672	Rahim Yar Khan	1,375	Toba Tek Singh	162			
Sargodha	2	Rajanpur	1,412	Vehari	10			
Sheikhupura	1,374	Rawalpindi	18	Attock	9			
Sialkot	93	Sahiwal	520	Bhakkar	113			
HALA	Sargodha	22	Sargodha	237	Chakwal	25		
MANDI BHAUDDIN	Attock	111	Sheikhupura	341	Gujranwala	6		
	Bahawalnagar	2	Sialkot	1,102	Gujrat	172		
	Bhakkar	182	Toba Tek Singh	89	Hafizabad	10		
	Chakwal	40	Vehari	297	Jhelum	33		
	Gujranwala	15	Attock	34	Kasur	102		
	Gujrat	326	Bahawalnagar	13	Khushab	108		
	Jhang	16	Bahawalpur	61	Lahore	298		
	Jhelum	535	Bhakkar	29	Mandi Bahauddin	1,325		
	Khushab	36	Chakwal	1	Mianwali	175		
	Mandi Bahauddin	4,991	Chiniot	523	Okara	429		
	Mianwali	118	DG Khan	46	Pakpattan	4		
	Rawalpindi	360	Faisalabad	1,394	Rahim Yar Khan	3		
	Sahiwal	26	Gujranwala	34	Rawalpindi	26		
	Sargodha	1,457	Gujrat	2	Sahiwal	763		
MULTAN	Bahawalnagar	451	Hafizabad	32	Sargodha	258		
	Bahawalpur	3,828	Jhang	54	Sheikhupura	35		
	Bhakkar	38	Kasur	91	Sialkot	15		

ANNEXURE III: DISTRICT-WISE RESULTS OF THE SOIL SAMPLES ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

District	Soil Parameter	Range (Minimum-Maximum)	Average Value	Fertility Status/Class	Standard Error of Mean (SEM)	Number of Samples
ATTOCK	pH	7.41-8.1	7.79	Neutral	0.03	42
	Electrical Conductivity (dSm ⁻¹)	0.12-0.75	0.28	Normal	0.02	42
	Organic Matter (%)	0.17-0.91	0.54	Low	0.03	42
	Available Phosphorus (ppm)	2-14	4.69	Low	0.31	42
	Extractable Potassium (ppm)	52-210	98	Low	6.52	42
BAHAWALNAGAR	pH	7.2-10.8	8.34	Neutral	0.00	9,527
	Electrical Conductivity (dSm ⁻¹)	0.1-24	0.84	Slightly saline	0.01	9,527
	Organic Matter (%)	0.1-2.31	0.61	Low	0.00	9,512
	Available Phosphorus (ppm)	1-43	5.89	Low	0.03	9,527
	Extractable Potassium (ppm)	32-400	157	Adequate	0.63	9,416
BAHAWALPUR	pH	7.4-11.2	8.30	Neutral	0.00	8,175
	Electrical Conductivity (dSm ⁻¹)	0.08-26.6	0.74	Slightly saline	0.01	8,174
	Organic Matter (%)	0.1-2.35	0.50	Low	0.00	8,143
	Available Phosphorus (ppm)	1-40	5.24	Low	0.03	8,169
	Extractable Potassium (ppm)	26-400	159	Adequate	0.68	8,004
BHAKKAR	pH	7.53-8.76	8.01	Neutral	0.02	179
	Electrical Conductivity (dSm ⁻¹)	0.1-0.83	0.24	Normal	0.01	179
	Organic Matter (%)	0.22-1.35	0.75	Low	0.02	179
	Available Phosphorus (ppm)	2-10	4.15	Low	0.10	179
	Extractable Potassium (ppm)	30-350	107	Marginal	2.63	179
CHAKWAL	pH	7.62-8.6	8.01	Neutral	0.02	55
	Electrical Conductivity (dSm ⁻¹)	0.1-1.35	0.21	Normal	0.02	55
	Organic Matter (%)	0.16-1.18	0.75	Low	0.03	55
	Available Phosphorus (ppm)	3-9	4.40	Low	0.16	55
	Extractable Potassium (ppm)	60-210	117	Marginal	3.93	55
CHINIOT	pH	7.41-9.53	8.06	Neutral	0.01	519
	Electrical Conductivity (dSm ⁻¹)	0.14-1.8	0.43	Normal	0.01	519
	Organic Matter (%)	0.1-1.05	0.61	Low	0.01	519
	Available Phosphorus (ppm)	1.5-16	6.40	Low	0.11	518
	Extractable Potassium (ppm)	56-400	141	Marginal	2.37	516
DERA GHAZI KHAN	pH	7.3-10.8	8.31	Neutral	0.00	9,269
	Electrical Conductivity (dSm ⁻¹)	0.026-36	0.92	Slightly saline	0.01	9,271
	Organic Matter (%)	0.1-2.19	0.54	Low	0.00	9,220
	Available Phosphorus (ppm)	1-52	5.20	Low	0.05	9,260
	Extractable Potassium (ppm)	26-400	174	Adequate	0.96	8,583

Reference Methods:

Olsen SR, Cole CV, Watanabe SN, Dean LA (1954). Estimation of available phosphorus in soils by extraction with sodium bicarbonate. US Department of Agriculture Circular 939, 19 p. Government Printing Office, Washington DC, USA.
 Berg MG, Gardner EH (1978). Methods of soil analysis used in the soil testing laboratory at Oregon State University. Special Report 321 (Revised Sep 1978), Agricultural Experimental Station, Oregon State University, Corvallis, USA, 44 p.
 Walkley A (1947). A critical examination of a rapid method for determining organic carbon in soils: Effect of variations in digestion conditions and of organic soil constituents. Soil Science, 63, 251-263.

ANNEXURE III: DISTRICT-WISE RESULTS OF THE SOIL SAMPLES ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

District	Soil Parameter	Range (Minimum-Maximum)	Average Value	Fertility Status/Class	Standard Error of Mean (SEM)	Number of Samples
FAISALABAD	pH	6.67-10.2	8.26	Neutral	0.01	2617
	Electrical Conductivity (dSm ⁻¹)	0.1-10	0.55	Slightly saline	0.01	2,616
	Organic Matter (%)	0.12-2.1	0.57	Low	0.00	2,614
	Available Phosphorus (ppm)	1-19	5.82	Low	0.05	2,617
	Extractable Potassium (ppm)	38-400	153	Adequate	1.35	2,511
GUJRANWALA	pH	7-10.75	8.12	Neutral	0.01	5,040
	Electrical Conductivity (dSm ⁻¹)	0.1-8.19	0.28	Normal	0.00	5,040
	Organic Matter (%)	0.1-1.69	0.55	Low	0.00	5,037
	Available Phosphorus (ppm)	1-27	5.85	Low	0.03	5,040
	Extractable Potassium (ppm)	34-400	156	Adequate	1.00	4,933
GUJRAT	pH	7-9.9	7.99	Neutral	0.03	278
	Electrical Conductivity (dSm ⁻¹)	0.1-2.19	0.31	Normal	0.01	278
	Organic Matter (%)	0.27-1.59	0.72	Low	0.02	278
	Available Phosphorus (ppm)	3-30	6.24	Low	0.20	278
	Extractable Potassium (ppm)	40-350	147	Marginal	3.96	277
HAFIZABAD	pH	7.2-11	8.32	Neutral	0.03	827
	Electrical Conductivity (dSm ⁻¹)	0.1-6.27	0.43	Normal	0.02	827
	Organic Matter (%)	0.1-1.78	0.57	Low	0.01	826
	Available Phosphorus (ppm)	1-17	6.07	Low	0.09	827
	Extractable Potassium (ppm)	42-400	148	Adequate	2.60	804
JHANG	pH	7.56-9.9	8.35	Alkaline	0.02	278
	Electrical Conductivity (dSm ⁻¹)	0.1-4.41	0.54	Slightly saline	0.03	278
	Organic Matter (%)	0.1-1.4	0.62	Low	0.01	277
	Available Phosphorus (ppm)	1-16	5.85	Low	0.19	271
	Extractable Potassium (ppm)	28-400	138	Marginal	4.87	271
JHELUM	pH	7.3-10.1	8.52	Alkaline	0.05	193
	Electrical Conductivity (dSm ⁻¹)	0.12-15	0.88	Slightly saline	0.11	193
	Organic Matter (%)	0.12-1.82	0.61	Low	0.02	193
	Available Phosphorus (ppm)	1-25	4.33	Low	0.25	193
	Extractable Potassium (ppm)	30-340	118	Marginal	4.05	191
KASUR	pH	7.1-10.99	8.14	Neutral	0.01	5,000
	Electrical Conductivity (dSm ⁻¹)	0.11-20.5	0.76	Slightly saline	0.02	5,000
	Organic Matter (%)	0.1-2.92	0.79	Low	0.01	4,983
	Available Phosphorus (ppm)	1-52	8.02	Marginal	0.09	4,990
	Extractable Potassium (ppm)	25-400	150	Adequate	1.00	4,831
KHANEWAL	pH	7.4-10.7	8.41	Alkaline	0.01	5,220
	Electrical Conductivity (dSm ⁻¹)	0.1-19.5	0.62	Slightly saline	0.01	5,220
	Organic Matter (%)	0.1-2.84	0.75	Low	0.00	5,217
	Available Phosphorus (ppm)	1-44	5.92	Low	0.06	5,211
	Extractable Potassium (ppm)	28-400	155	Adequate	1.04	5,067

ANNEXURE III: DISTRICT-WISE RESULTS OF THE SOIL SAMPLES ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

District	Soil Parameter	Range (Minimum-Maximum)	Average Value	Fertility Status/Class	Standard Error of Mean (SEM)	Number of Samples
KHUSHAB	pH	7.4-8.7	8.06	Neutral	0.02	119
	Electrical Conductivity (dSm ⁻¹)	0.13-3.14	0.54	Slightly saline	0.05	119
	Organic Matter (%)	0.2-1.7	0.85	Low	0.03	119
	Available Phosphorus (ppm)	1-15	4.86	Low	0.24	119
	Extractable Potassium (ppm)	40-360	154	Adequate	7.20	109
LAHORE	pH	7-10.3	8.33	Neutral	0.02	1,743
	Electrical Conductivity (dSm ⁻¹)	0.1-22.7	0.69	Slightly saline	0.03	1,743
	Organic Matter (%)	0.1-2.89	0.80	Low	0.01	1,717
	Available Phosphorus (ppm)	1-50	6.66	Low	0.14	1,738
	Extractable Potassium (ppm)	25-400	152	Adequate	1.74	1,662
LAYYAH	pH	7.6-10.3	8.23	Neutral	0.01	1,124
	Electrical Conductivity (dSm ⁻¹)	0.1-7.9	0.43	Normal	0.01	1,124
	Organic Matter (%)	0.1-1.6	0.48	Low	0.01	1,116
	Available Phosphorus (ppm)	1-25	4.44	Low	0.09	1,124
	Extractable Potassium (ppm)	26-380	110	Marginal	1.65	1,117
LODHRAN	pH	7.6-10.2	8.27	Neutral	0.01	1,172
	Electrical Conductivity (dSm ⁻¹)	0.1-8.53	1.18	Saline	0.04	1,172
	Organic Matter (%)	0.1-1.72	0.71	Low	0.01	1,172
	Available Phosphorus (ppm)	1-24	6.26	Low	0.11	1,172
	Extractable Potassium (ppm)	30-400	153	Adequate	2.17	1,136
MANDI BHAUDDIN	pH	7.2-10.33	8.27	Neutral	0.01	1,424
	Electrical Conductivity (dSm ⁻¹)	0.1-9.2	1.18	Saline	0.01	1,424
	Organic Matter (%)	0.16-1.66	0.71	Low	0.01	1,424
	Available Phosphorus (ppm)	1-20	6.26	Low	0.07	1,424
	Extractable Potassium (ppm)	30-400	153	Adequate	1.75	1,413
MIANWALI	pH	7.21-8.58	7.91	Neutral	0.01	296
	Electrical Conductivity (dSm ⁻¹)	0.14-1.06	0.37	Normal	0.01	296
	Organic Matter (%)	0.18-1.4	0.76	Low	0.02	296
	Available Phosphorus (ppm)	2-14	4.89	Low	0.11	296
	Extractable Potassium (ppm)	50-300	148	Marginal	3.17	292
MULTAN	pH	7.3-10	7.91	Neutral	0.01	5,508
	Electrical Conductivity (dSm ⁻¹)	0.04-37	0.37	Normal	0.02	5,509
	Organic Matter (%)	0.1-2.97	0.76	Low	0.00	5,479
	Available Phosphorus (ppm)	1-50	4.89	Low	0.07	5,494
	Extractable Potassium (ppm)	26-400	148	Marginal	1.13	5,225
MUZAFFARGARH	pH	7.3-10	7.91	Neutral	0.01	1,726
	Electrical Conductivity (dSm ⁻¹)	0.1-9.9	0.37	Normal	0.02	1,726
	Organic Matter (%)	0.1-1.5	0.76	Low	0.01	1,726
	Available Phosphorus (ppm)	1-16	4.89	Low	0.06	1,726
	Extractable Potassium (ppm)	25-392	148	Marginal	1.56	1,715

ANNEXURE III: DISTRICT-WISE RESULTS OF THE SOIL SAMPLES ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

District	Soil Parameter	Range (Minimum-Maximum)	Average Value	Fertility Status/Class	Standard Error of Mean (SEM)	Number of Samples
NANKANA SAHIB	pH	7.46-10.34	8.31	Neutral	0.02	897
	Electrical Conductivity (dSm ⁻¹)	0.1-5	0.54	Slightly saline	0.02	897
	Organic Matter (%)	0.1-1.02	0.58	Low	0.01	897
	Available Phosphorus (ppm)	1-24	7.23	Low	0.10	897
	Extractable Potassium (ppm)	62-400	149	Marginal	2.47	856
NAROWAL	pH	7.45-7.75	7.58	Neutral	0.05	7
	Electrical Conductivity (dSm ⁻¹)	0.31-0.48	0.40	Normal	0.02	7
	Organic Matter (%)	0.5-0.71	0.63	Low	0.03	7
	Available Phosphorus (ppm)	4-9	6.57	Low	0.65	7
	Extractable Potassium (ppm)	104-132	117	Marginal	3.95	7
OKARA	pH	7.14-9.18	8.15	Neutral	0.01	488
	Electrical Conductivity (dSm ⁻¹)	0.11-4.86	0.42	Normal	0.02	488
	Organic Matter (%)	0.17-1.84	0.92	Marginal	0.01	488
	Available Phosphorus (ppm)	3-20	5.33	Low	0.11	488
	Extractable Potassium (ppm)	40-400	137	Marginal	2.72	484
PAKPATTAN	pH	7.2-9.34	8.20	Neutral	0.01	291
	Electrical Conductivity (dSm ⁻¹)	0.12-8.2	0.35	Normal	0.03	291
	Organic Matter (%)	0.26-1.78	0.89	Marginal	0.02	291
	Available Phosphorus (ppm)	3-15	5.42	Low	0.14	291
	Extractable Potassium (ppm)	50-370	152	Adequate	3.64	285
RAHIM YAR KHAN	pH	7.7-9.9	8.21	Neutral	0.01	783
	Electrical Conductivity (dSm ⁻¹)	0.11-12.57	0.85	Slightly saline	0.05	782
	Organic Matter (%)	0.1-1.23	0.36	Low	0.01	779
	Available Phosphorus (ppm)	2-12	5.23	Low	0.06	783
	Extractable Potassium (ppm)	60-380	161	Adequate	0.97	783
RAJANPUR	pH	8-9.3	8.44	Alkaline	0.02	211
	Electrical Conductivity (dSm ⁻¹)	0.1-9.9	1.57	Saline	0.15	211
	Organic Matter (%)	0.1-1.4	0.57	Low	0.02	211
	Available Phosphorus (ppm)	1-14	3.90	Low	0.15	211
	Extractable Potassium (ppm)	30-362	155	Adequate	5.14	202
RAWALPINDI	pH	7.22-8.5	7.81	Neutral	0.03	101
	Electrical Conductivity (dSm ⁻¹)	0.13-0.85	0.26	Normal	0.01	101
	Organic Matter (%)	0.27-1.18	0.55	Low	0.02	101
	Available Phosphorus (ppm)	2-14	5.04	Low	0.19	101
	Extractable Potassium (ppm)	40-380	118	Marginal	5.09	101
SAHIWAL	pH	7.49-10.4	8.22	Neutral	0.01	874
	Electrical Conductivity (dSm ⁻¹)	0.1-7.35	0.49	Normal	0.02	874
	Organic Matter (%)	0.13-2.57	0.78	Marginal	0.01	874
	Available Phosphorus (ppm)	3-18	5.12	Low	0.07	874
	Extractable Potassium (ppm)	30-400	138	Marginal	2.26	862

ANNEXURE III: DISTRICT-WISE RESULTS OF THE SOIL SAMPLES ANALYZED BY FAUJI FERTILIZER COMPANY LIMITED

District	Soil Parameter	Range (Minimum-Maximum)	Average Value	Fertility Status/Class	Standard Error of Mean (SEM)	Number of Samples
SARGODHA	pH	7.35-9.35	8.02	Neutral	0.01	456
	Electrical Conductivity (dSm ⁻¹)	0.11-5.04	0.46	Normal	0.02	456
	Organic Matter (%)	0.22-1.79	0.77	Low	0.01	456
	Available Phosphorus (ppm)	2-18	5.11	low	0.09	456
	Extractable Potassium (ppm)	40-400	167	Adequate	3.50	446
SHEIKHUPURA	¹ pH	7.37-9.79	8.28	Neutral	0.05	143
	¹ Electrical Conductivity (dSm ⁻¹)	0.19-1.9	0.53	Slightly saline	0.02	143
	² Organic Matter (%)	0.23-1.43	0.72	Low	0.02	143
	³ Available Phosphorus (ppm)	3-18	6.34	Low	0.24	143
	⁴ Extractable Potassium (ppm)	90-400	163	Adequate	6.32	142
SIALKOT	pH	7.24-8.45	7.70	Neutral	0.03	85
	Electrical Conductivity (dSm ⁻¹)	0.21-0.84	0.46	Normal	0.02	85
	Organic Matter (%)	0.34-1.22	0.69	Low	0.02	85
	Available Phosphorus (ppm)	3-28	7.84	Low	0.44	85
	Extractable Potassium (ppm)	70-370	130	Marginal	4.44	85
TOBA TEK SINGH	pH	7.53-8.64	7.96	Neutral	0.02	161
	Electrical Conductivity (dSm ⁻¹)	0.17-0.99	0.41	Normal	0.01	161
	Organic Matter (%)	0.18-1.18	0.59	Low	0.01	161
	Available Phosphorus (ppm)	2-20	5.95	Low	0.20	161
	Extractable Potassium (ppm)	74-336	140	Marginal	3.92	160
VEHARI	pH	7.6-9	8.28	Neutral	0.02	297
	Electrical Conductivity (dSm ⁻¹)	0.1-5.3	0.71	Slightly saline	0.04	297
	Organic Matter (%)	0.1-1.4	0.64	Low	0.01	297
	Available Phosphorus (ppm)	1-37	4.85	Low	0.22	297
	Extractable Potassium (ppm)	34-282	127	Marginal	3.08	297

ANNEXURE IV: CRITERIA FOR SOIL NUTRIENT ANALYSIS (mg/kg)

THE INTERNATIONAL CENTER FOR AGRICULTURAL RESEARCH IN THE DRY AREAS (ICARDA)

Nutrient/Organic Matter	Test	Low	Marginal	Adequate
Organic Matter	Walkley-Black Method (%)	< 0.86	0.86-1.29	>1.29
Phosphorus	NaHCO ₃	< 8	8-15	>15
Potassium	NH ₄ OAc	<100	100-150	>150
Zinc	DTPA	<0.5	0.5-1.0	>1.0
Manganese	DTPA	<1.0	1.0-2.0	>2.0
Boron	HCl	<0.45	0.45-1.0	>1.0

(Source: ICARDA Manual 2013)

RAPID SOIL FERTILITY SURVEY AND SOIL TESTING INSTITUTE, PUNJAB

Nutrient/Organic Matter	Test	Low	Medium	Adequate
Organic Matter	Walkley-Black Method (%)	< 0.86	0.86-1.29	>1.29
Phosphorus	NaHCO ₃	<7	7-14	>14
Potassium	NH ₄ OAc	<80	80-180	>180

(Source: Rapid Soil Fertility Survey and Soil Testing Institute, Punjab)

FAUJI FERTILIZER COMPANY LIMITED

pH	Acidic	<6.5
	Neutral	6.5-7.5
	Alkaline	>7.5
Electrical Conductivity (dSm ⁻¹)	Normal	<0.5
	Slightly saline	0.5-1.0
	Saline	>1.0

* Soil pH and Electrical Conductivity were measured in 1:2.5, soil:water extract.

(Source: Fauji Fertilizer Company Limited)

ANNEXURE V: ADDRESSES OF SOIL AND WATER TESTING FACILITIES IN PUNJAB

Soil Testing Facility	District	Address
Fatima Fertilizers Company Limited/Pak Arab Fertilizers Soil Fertility Lab	Multan	Pak Arab Plant, Multan
	Rahim Yar Khan	Fatima Plant, Rahim Yar Khan
	Muzaffargarh	Fatima Sugar Mills, Muzaffargarh
Engro Fertilizers Limited Soil Fertility Lab	Multan	Mehar Fatima Towers, Old Bahawalpur Road, Multan
Fauji Fertilizer Company Limited Farm Advisory Center	Sahiwal	Arifwala Road, Sahiwal
	Multan	Near Ibn-e-Sena Hospital, Southern Bypass, Multan
	Bahawalpur	Near Al-Rehman Oil Mills, Opposite Gulistan Textile Mills, KLP Road, Bahawalpur
	Hassan Abdal	7 Kilometers, Abbotabad Road, opposite AWC, Hassan Abdal
Rapid Soil Fertility Survey and Soil Testing Institute, Punjab Provincial Reference Lab	Lahore	Raiwind, Lahore
Rapid Soil Fertility Survey and Soil Testing Institute, Punjab Divisional Lab	Lahore	Thokar Niaz Baig, Lahore
	Rawalpindi	Data Ganj Bakhsh road, Murree Road, Rawalpindi
	Faisalabad	Ayub Agriculture Research Institute, Faisalabad
	Gujranwala	G.T Road, Divisional Public School, Gujranwala
	Multan	Agri. Farm, Old Shujabad Road, Multan
	D.G. Khan	Near Dar-ul-Aman, D.G. Khan
	Sargodha	Old Sulman Pura, Sargodha
	Bahawalpur	Regional Agriculture Research Institute, Bahawalpur
Rapid Soil Fertility Survey and Soil Testing Institute, Punjab District Lab	Attock	Kamra Road Attock
	Bahawalnagar	Haronabad Road, near Khan Petroleum, Bahawalnagar
	Bhakkar	Stadium Road, near DHO Office, Bhakkar
	Chakwal	Talagang Road, Chakwal
	Chiniot	Tehsil Chowk near DCO Office, Chiniot
	Gujrat	Service Mor G.T. Road, Gujrat
	Hafizabad	District Complex, Hafizabad
	Jhang	Near Railway Phattak, Toba Road, Jhang
	Jhelum	Near District Accounts Office, Behind Kacheri, Jhelum
	Kasur	District Court Complex, Kasur
	Khanewal	Near Nizamabad Pulley, People's Colony, Khanewal
	Khushab	Soil and Water Testing Lab Khushab, opposite Joharabad
	Layyah	District complex, Layyah
	Lodhran	Bahawalpur Road, Lodhran
	Mandi Bahauddin	District Complex, Near Police Lines Mandi Bahauddin
	Mianwali	Near Tehsil Chowk, Mianwali
	Muzaffargarh	Jhang Road, Muzaffargarh
	Narowal	Shakargarh Road District Complex, Narowal City
	Okara	Katcheri Road, District Complex, Okara City
	Pakpattan	Besides Kacheri, Pakpattan
	Rahim Yar Khan	Opposite Veterinary Hospital, Rahim Yar Khan
	Rajanpur	Near Commerce College, Rajanpur
	Sahiwal	Pakpattan Road, Sahiwal
	Sheikhupura	Kiani Road, District Courts, Sheikhpura
	Sialkot	Pasroor Road, Near Gulshan-e-Iqbal, Sialkot
	Toba Tek Singh	Jhang Road, Near Boys College, Toba Tek Singh
	Vehari	Near District Court Complex, Government Seed Farm, Vehari

ANNEXURE V: ADDRESSES OF SOIL AND WATER TESTING FACILITIES IN PUNJAB (URDU)

پنجاب میں موجود مٹی اور پانی کی تجزیہ گاہیں

پنجاب میں موجود مٹی اور پانی کی تجزیہ گاہیں		پنجاب میں موجود مٹی اور پانی کی تجزیہ گاہیں	
کامرہ روڈ انک	انک	پاک عرب پلانٹ۔ ملتان	ملتان
ہارون آباد روڈ نزد خان پٹرولیم بہاولنگر	بہاولنگر	فاطمہ پلانٹ۔ رحیم یار خان	رحیم یار خان
سٹیڈیم روڈ نزد ڈی ایچ او آفس بھکر	بھکر	فاطمہ شوگر ملز۔ پرانا بہاول پور روڈ۔ ملتان	مظفر گڑھ
تلہ گنگ روڈ چکوال	چکوال	مہر فاطمہ شوگر ملز۔ پرانا بہاول پور روڈ۔ ملتان	ملتان
تحصیل چوک نزد ڈی سی او آفس چنیوٹ	چنیوٹ	عارف والا روڈ ساہیوال	ساہیوال
سروس موڑ جی ٹی روڈ گجرات	گجرات	نزد ابن سینا ہسپتال سدرن بائی پاس ملتان	ملتان
ڈسٹرکٹ کمپلیکس حافظ آباد	حافظ آباد	نزد المرحمان آئل ملز۔ بالمقابل گلستان ٹیکسٹائل ملز۔ کے ایل پی روڈ بہاولپور	بہاولپور
نزد ریلوے پھانک۔ ٹوبہ روڈ جھنگ	جھنگ	7 کلو میٹر لیٹ آباد روڈ بالمقابل اے ڈیلو سی۔ حسن ابدال	حسن ابدال
نزد ڈسٹرکٹ اکاؤنٹ آفس۔ کچہری جہلم	جہلم	نزد رائے ونڈ لاہور	لاہور
ڈسٹرکٹ کورٹ کمپلیکس قصور	قصور	ڈائریکٹوریٹ برائے تحقیقی ادارہ زرعی زمین صوبائی تجزیہ گاہ	
نزد ناظم آباد پی پی پیٹری کالونی خانیوال	خانیوال	ٹھوکر نیا بیگ لاہور	لاہور
سائل اینڈ وائٹسٹنگ لیب خوشاب بالمقابل جوہر آباد	خوشاب	داتا گنج بخش روڈ مری روڈ راولپنڈی	راولپنڈی
ڈسٹرکٹ کمپلیکس لیہ	لیہ	ایوب ایگریکلچر ریسرچ سنٹر فیصل آباد	فیصل آباد
بہاولپور روڈ لودھراں	لودھراں		
		جی ٹی روڈ ڈویژنل پبلک سکول گجرانوالہ	گجرانوالہ
ڈسٹرکٹ کمپلیکس۔ نزد پولیس لائنز منڈی بہاالدین	منڈی بہاالدین	ایگری فارم پر اناشجاع آباد روڈ ملتان	ملتان
نزد تحصیل چوک میانوالی	میانوالی	نزد دار الامان ڈیرہ غازی خان	ڈیرہ غازی خان
جھنگ روڈ مظفر گڑھ	مظفر گڑھ	پرانا مسلمان پورہ۔ سرگودھا	سرگودھا
شکر گڑھ روڈ تحصیل ڈسٹرکٹ کمپلیکس۔ ناروال شہر	ناروال	ریجنل ایگریکلچر ریسرچ انسٹیٹیوٹ۔ بہاولپور	بہاولپور
کچہری روڈ۔ ڈسٹرکٹ کمپلیکس اوکاڑہ سٹی	اوکاڑہ		
کچہری اوکاڑہ	پاکپتن		
بالمقابل وٹرنری ہسپتال۔ رحیم یار خان	رحیم یار خان		
نزد کامرس کالج راجن پور	راجن پور		
پاکپتن روڈ ساہیوال	ساہیوال		
کیانی روڈ ڈسٹرکٹ کورٹس شیخوپورہ	شیخوپورہ		
پسرور روڈ نزد گلشن اقبال سیالکوٹ	سیالکوٹ		
جھنگ روڈ نزد بوائز۔ ٹوبہ ٹیک سکھ	ٹوبہ ٹیک سکھ		
نزد ڈسٹرکٹ کورٹ کمپلیکس گورنمنٹ سید فارم و ہاڑی	وہاڑی		

ڈائریکٹوریٹ برائے تحقیقی ادارہ زرعی زمین ضلعی تجزیہ گاہ

ANNEXURE VI: DOMINANT SOIL SERIES, CLASSIFICATION AND AREAS OF THEIR OCCURRENCE

Soil Series	US Soil Taxonomy	FAO World Soil Map	Areas of Occurrence
Abbottabad	Haplaquepts	Calcaric Gleysols	Rawalpindi
Adilpur	Halic Camborthids	Haplic Yermosols	Multan North
Argan	Typic Ustoochrepts	Calcaric Cambisols	Gujrat, Rawalpindi, Gujranwala, Attock
Asni	Typic Torrifluvents	Calcaric Fluvisols	Dera Ghazi Khan
Awagat	Aquic Camborthids/Fluentic	Calcaric Gleysols/Haplic Yermosols	Multan
Bagh	Fluentic Camborthids	Haplic Yermosols	Faisalabad, Thal North, Sahiwal, Jhang, Multan South, Multan North
Bahawalnagar	Fluentic Camborthids	Haplic Yermosols	Bahawalnagar
Bahatar	Typic Ustochrepts	Calcaric Cambisols	Attock
Balkassar	Typic Camborthids/Typic Ustochrepts	Haplic Yermosols/Calcaric Cambisols	Rawalpindi, Attock
Bambul	Typic Ustochrepts	Calcaric Cambisols	Thal North
Basal	Typic Camborthids	Haplic Yermosols	Attock
Bhalwal	Fluentic Camborthids	Haplic Yermosols	Sahiwal, Gujrat, Sheikhpura, Gujranwala, Lahore, Jhang, Faisalabad, Sargodha
Bhakkar	Typic Ustochrepts	Calcaric Cambisols	Thal South, Thal North
Bhangriwala	Fluentic Camborthids	Haplic Yermosols	Cholistan
Bhareri	Typic Torriorthents	Calcaric Fluvisols	Thal South, Thal North
Bijnot	Typic Torripsamment	Calcaric Rhegosols	Cholistan
Burhan	Typic Ustochrepts	Calcaric Cambisols	Attock
Chakwal	Fluentic Camborthids	Haplic Yermosols	Rawalpindi
Chamba	Fluentic Ustochrepts	Eutric Cambisols	Rawalpindi
Chinni	Fluentic Camborthids	Haplic Yermosols	Dera Ghazi Khan
Cholistan	Typic Torripsamment	Calcaric Rhegosols	Bahawalnagar
Dad	Typic Camborthids	Haplic Yermosols	Thal South
Darra	Typic Camborthids	Haplic Yermosols	Cholistan
Daryakhan	Fluentic Camborthids	Haplic Yermosols	Thal South, Thal North
Dharanwala	Fluentic Camborthids	Haplic Yermosols	Bahawalnagar
Dhulian	Typic Ustochrepts	Calcaric Cambisols	Attock
Dhumman	Typic Camborthids	Typic Camborthids	Rawalpindi
Dhurnal	Lithic Ustochrepts	Lithic Calcaric Cambisols	Attock
Domel	Typic Ustochrepts	Calcaric Cambisols	Attock
Dungi	Ealic Camborthids	Haplic Yermosols	Sahiwal, Sheikhpura, Multan South, Multan North
Eminabad	Typic Halorthids	Orthic Solonetz	Sheikhpura, Gujranwala
Fazilpur	Torrertic Camborthids/Typic Torrerts	Haplic Yermosols/Chromic Vertisols	Dera Ghazi Khan
Firdous	Typic Camborthids	Haplic Xerosols/Haplic Yermosols	Thal South, Thal North
Firoz	Typic Halorthids	Orthic Solonetz	Sahiwal, Sheikhpura, Lahore, Sargodha, Multan North
Fort Abbas	Typic Torripsamment	Calcaric Rhegosols	Cholistan
Gajiana	Ealic Camborthids	Haplic Yermosols	Sahiwal, Sheikhpura, Gujranwala, Lahore, Multan South, Multan North, Sargodha
Gamber	Halic Camborthids	Haplic Yermosols	Sahiwal, Multan North
G&hra	Halic Camborthids	Haplic Yermosols	Sheikhpura, Multan South, Multan North, Sargodha
Ghazi	Typic Ustochrepts	Calcaric Cambisols	Attock
Godara	Typic Torriorthents	Calcaric Fluvisols	Thal South
Gujranwala	Typic Ustochrepts	Eurtic Cambisols	Gujrat, Gujranwala, Lahore, Sargodha, Attock, Sheikhpura
Guliana	Typic Ustochrepts	Eurtic Cambisols	Rawalpindi, Attock
Hadwar	Typic Torrifluvents	Calcaric Fluvisols	Dera Ghazi Khan
Hafizabad	Fluentic Camborthids	Haplic Yermosols	Sahiwal, Gujrat, Sheikhpura, Gujranwala, Lahore, Jhang, Faisalabad, Sargodha, Multan North

ANNEXURE VI: DOMINANT SOIL SERIES, CLASSIFICATION AND AREAS OF THEIR OCCURRENCE

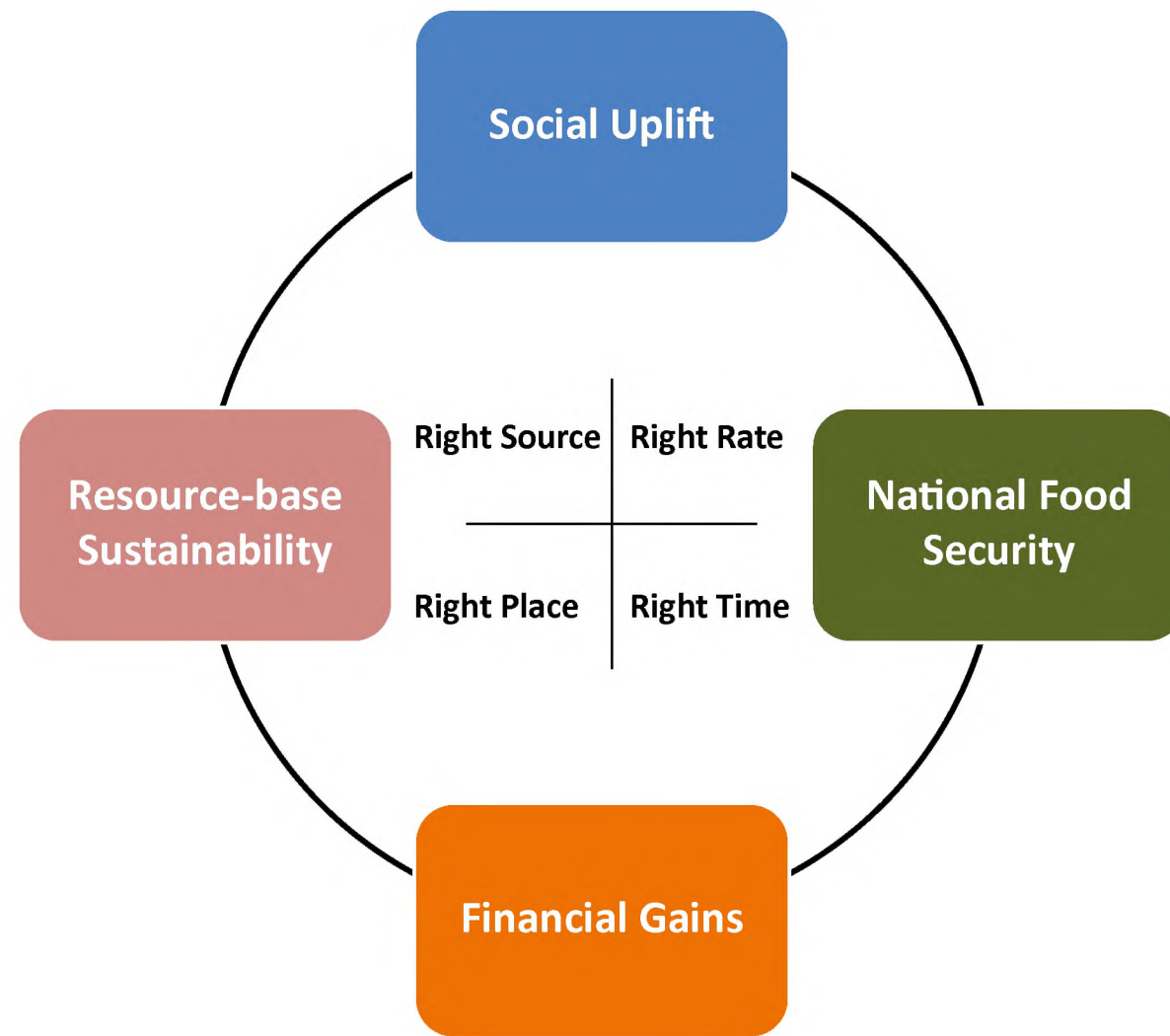
Soil Series	US Soil Taxonomy	FAO World Soil Map	Areas of Occurrence
Hyderabad	Ustic Torripsamment	Calcaric Fluvisols	Thal South, Thal North
Haripur	Typic Ustochrepts	Calcaric Cambisols	Rawalpindi
Harunabad	Fluventic Camborthids	Haplic Yermosols	Bahawalnagar
Hathiana	Fluventic Camborthids	Haplic Yermosols	Sheikhupura
Injra	Typic Ustipsamments	Calcaric Rhegosols	Attock
Isawala	Typic Camborthids	Haplic Yermosols	Thal South
Islamgarh	Typic Torripsamment	Calcaric Rhegosols	Cholistan
Jabbi	Typic Ustochrepts	Calcaric Cambisols	Attock
Jagan	Typic Camborthids	Orthic Solonchaks	Dera Ghazi Khan
Jamgarh	Fluventic Torriorthents	Calcaric Fluvisols	Cholistan
Jand	Typic Ustipsamments	Eurtic Fluvisols	Attock
Jaggan	Typic Torripsamment	Calcaric Rhegosols	Cholistan
Jalalpur	Typic Salorthids/Fluventic Camborthids	Orthic Solonchake	Multan South, Multan North
Jaranwala	Typic Camborthids	Haplic Yermosols	Sahiwal, Lahore, Faisalabad, Multan North
Jarwar	Typic Salorthids/Fluventic Camborthids	Orthic Solonchake	Muzaffargarh
Jaura	Typic Ustochrepts	Calcaric Cambisols	Gujrat
Jhang	Typic Torripsamment	Calcaric Rhegosols	Thal North, Jhang, Multan South, Multan North
Jhumra	Aquic Camborthids/Fluventic Camborthids	Calcaric Gleysols	Faisalabad
Joanna	Typic Halorthents	Orthic Solonchake	Sahiwal, Jhang, Multan South, Sargodha
Kahrar	Halic Camborthids	Haplic Yermosols/Orthic Solonchake	Multan South, Multan North
Kahuta	Typic Ustochrepts	Eutric Cambisols	Rawalpindi, Attock
Kakki	Typic Camborthids	Haplic Yermosols	Cholistan
Kallarwala	Typic Camborthids	Haplic Yermosols	Dera Ghazi Khan
Kamoke	Typic Ustochrepts	Eutric Cambisols/Eurtic Gleysols	Gujranwala, Lahore
Kasur	Halic Ustorthents/Halic Torriorthents	Orthic Solonchaks/Gleysic Solonchaks	Lahore, Thal South, Sahiwal, Jhang, Multan South, Multan North, Sargodha
Khair	Typic Torriorthents/Typic Ustorthents	Calcaric Fluvisols	Sahiwal, Gujrat, Sheikhupura, Rawalpindi, Gujranwala, Lahore, Jhang, Multan South, Faisalabad, Sargodha, Muzaffargarh
Kharala	Typic Salorthids	Orthic Solochaks	Multan South, Multan North
Khatan	Fluventic Camborthids	Haplic Yermosols	Bahawalnagar, Cholistan
Khaur	Typic Ustochrepts	Calcaric Cambisols	Attock
Khokhar	Typic Camborthids	Haplic Yermosols	Thal South, Thal North
Khumbi	Typic Torriorthents	Calcaric Fluvisols	Thal South, Thal North
Khurrianwala	Typic Halorthids	Orthic Solonetz	Sahiwal, Sheikhupura, Gujranwala, Lahore, Jhang, Faisalabad, Multan North
Kotli	Udorthentic Chromusterts	Chromic Vertisols	Gujrat, Gujranwala
Kufri	Typic Ustochrepts	Calcaric Cambisols	Attock
Kunda	Typic Ustipsamments	Eurtic Fluvisols	Attock
Kunjah	Udorthentic Chromusterts	Chromic Vertisols	Gujrat, Gujranwala, Lahore, Sargodha
Lakhewala	Fluventic Camborthids	Haplic Yermosols	Bahawalnagar
Lalian	Typic Torriorthents	Calcaric Fluvisols	Thal South, Thal North, Sahiwal, Lahore, Jhang, Multan South, Multan North
Lunda	Typic Halorthids	Orthic Solonetz	Multan South, Multan North
Faisalabad	Fluventic Camborthids	Haplic Yermosols	Sahiwal, Gujrat, Sheikhupura, Gujranwala, Faisalabad, Lahore, Sargodha, Multan North
Malik	Typic Torriorthents (Typic Ustorthents)	Calcaric Fluvisols	Sahiwal, Sheikhupura, Lahore, Multan South, Gujranwala
Mankera	Typic/Halic Torripsamment	Calcaric Rhegosols	Thal South, Thal North
Mansehra	Typic Eutrochrepts	Eutric Cambisols	Rawalpindi

ANNEXURE VI: DOMINANT SOIL SERIES, CLASSIFICATION AND AREAS OF THEIR OCCURRENCE

Soil Series	US Soil Taxonomy	FAO World Soil Map	Areas of Occurrence
Mariala	Halic Camborthids	Haplic Yermosols/Orthic Solochaks	Multan North
Maruwala	Typic Torripsamment	Calcaric Rhegosols	Cholistan
Matli	Typic Calciorthids	Haplic Yermosols	Multan South, Multan North, Muzaffargarh
Mial	Typic Calciorthids	Haplic Yermosols/Haplic Xerosols	Attock, Chakwal
Miani	Typic Calciorthids/Ustochrepts	Haplic Yermosols/Calcaric Cambisols	Thal South, Thal North, Sahiwal, Gujrat, Sheikhupura, Gujranwala, Lahore, Jhang, Multan South, Multan North, Faisalabad
Miranpur	Aquic Ustochrepts	Eutric Cambisols/Eutric Gleysols	Sheikhupura, Gujranwala
Missa	Typic Calciorthids/Typic Ustochrepts	Haplic Yermosols/Calcaric Cambisols	Rawalpindi, Attock, Chakwal
Missan	Halic Camborthids	Haplic Yermosols	Sheikhupura, Sargodha, Multan North
Munda	Typic Camborthids	Haplic Yermosols	Thal South
Murad	Halic Camborthids	Haplic Yermosols	Bahawalpur
Muradwala	Typic Calciorthids	Calcic Yermosols	Cholistan
Murat	Typic Calciorthids	Haplic Yermosols/Haplic Xerosols	Attock
Nabipur	Typic Camborthids	Haplic Yermosols	Sheikhupura, Multan South, Multan North, Rahim Yar Khan, Chakwal
Nammal	Typic Camborthids	Haplic Yermosols	Attock, Chakwal
Nawankot	Typic Halorthents	Orthic Solochaks/Haplic Yermosols	Lahore, Multan South, Multan North
Niazbeg	Typic Camborthids	Haplic Yermosols	Thal South, Thal North
Notak	Typic Camborthids	Haplic Yermosols	Thal South, Thal North
Nurpur	Typic Camborthids	Haplic Yermosols	Thal South, Thal North
Pacca	Typic Camborthids/Aquic Camborthids	Haplic Yermosols/Calcaric Gleysols	Sahiwal, Sheikhupura, Gujranwala, Lahore, Jhang, Multan South, Multan North, Dera Ghazi Khan, Sargodha, Attock
Pasrur	Vertic Ustochrepts	Eutric Cambisols	Gujrat, Gujranwala
Pindorian	Typic Ustochrepts	Eutric Cambisols	Gujrat, Sheikhupura, Gujranwala, Lahore, Faisalabad, Sargodha, Attock
Pitafi	Typic Salorthids	Orthic Solonchaks	Multan South, Multan North, Muzaffargarh
Qadirabad	Typic Halorthids	Orthic Solochaks/Orthic Solonetz	Sahiwal
Qazian	Lithic Torripsamments	Calcaric Rhegosols	Rawalpindi, Attock
Qutbal	Typic Ustorthents	Calcaric Rhegosols	Attock, Chakwal
Rajanpur	Typic Camborthids/Typic Torrerts	Haplic Yermosols/Chromic Vertisols	Dera Ghazi Khan
Rajjar	Typic Ustorthents/Typic Torriorthents	Calcaric Rhegosols	Gujrat, Rawalpindi, Attock
Rangpur	Typic Torripsamments	Calcaric Rhegosols	Thal South, Thal North
Rasulpur	Typic Camborthids	Haplic Yermosols	Thal North, Gujrat, Sheikhupura, Gujranwala, Lahore, Jhang, Faisalabad, Sargodha, Multan North
Rawal	Typic Ustochrepts	Calcaric Cambisols	Rawalpindi
Rawalpindi	Typic Ustochrepts	Eutric Cambisols	Rawalpindi
Renhal	Typic Torripsamments	Calcaric Rhegosols	Cholistan
Rustam	Typic Torriorthents/Typic Torrifluents	Calcaric Fluvisols	Thal North, Sahiwal, Sheikhupura, Lahore, Jhang, Multan South, Multan North, Sargodha
Sagar	Aeric Haplaquepts	Calcaric Gleysols	Sheikhupura, Gujranwala, Lahore
Salamsar	Fluventic Camborthids	Haplic Yermosols	Cholistan
Sanawan	Typic Halaquents	Takyric Solonchaks	Thal South
Satghara	Typic Halorthids	Orthic Solonetz/Solonchaks	Thal South, Thal North, Sahiwal, Sheikhupura, Gujranwala, Jhang, Multan South, Multan North, Sargodha
Satwal	Udortnentic Chromusverts	Chromic Vertisols	Rawalpindi, Chakwal
Shahdara	Typic Ustifluents/Ustorthents	Calcaric Fluvisols	Thal South, Thal North, Sahiwal, Gujrat, Sheikhupura, Rawalpindi, Muzaffargarh, Gujranwala, Lahore, Jhang, Multan South,
	Typic Torrifluents/Torriorthents		Multan North, Dera Ghazi Khan, Rahim Yar Khan, Faisalabad, Sargodha
Shahpur	Fluventic Camborthids	Haplic Yermosols	Thal North, Sahiwal, Sheikhupura, Jhang, Sargodha, Multan North

ANNEXURE VI: DOMINANT SOIL SERIES, CLASSIFICATION AND AREAS OF THEIR OCCURRENCE

Soil Series	US Soil Taxonomy	FAO World Soil Map	Areas of Occurrence
Shakargarn	Typic Ustochrepts	Eutric Cambisols	Gujranwala
Shergarh	Typic Camborthids	Haplic Yermosols	Multan South, Multan North
Shikarpur	Typic Camborthids	Haplic Yermosols/Calcaric Gleysols	Multan North
Sialkot	Typic Ustochrepts	Eutric Cambisols	Gujranwala
Sindhelianwali	Typic Halorthids	Orthic Solonetz	Thal North, Sahiwal, Gujrat, Sheikhpura, Gujranwala, Lahore, Jhang, Multan South, Multan North, Faisalabad, Sargodha
Sindhwan	Typic Calciorthids	Calcic Yermosols	Gujranwala, Lahore, Faisalabad, Sargodha
Sirka	Typic Ustochrepts	Caolcaric Cambisols	Attock
Soan	Typic Torrifluvents/Typic Ustifluvents	Calcaric Fluvisols	Rawalpindi, Chakwal
Sodhra	Typic Torripsamments/Typic Ustipsamments	Calcaric Fluvisols/Eutric Fluvisols	Thal South, Thal North, Sahiwal, Gujrat, Dera Ghazi Khan, Sheikhpura, Lahore, Jhang, Multan South, Multan North, Faisalabad
Sukherwala	Fluventic Camborthids	Hapic Yermosols	Cholistan
Sultanpur	Typic Camborthids	Haplic Yermosols	Thal North, Sahiwal, Sheikhpura, Lahore, Jhang, Faisalabad, Multan North
Talai	Typic Torripsamments	Calcaric Rhegosols	Thal North
Talagang	Typic Ustocrepts/Fluventic Camborthids	Calcaric Cambisols/Hapic Yermosols	Attock, Chakwal
Thal	Typic Torripsamments	Calcaric Rhegosols	Thal South, Thal North
Theri	Typic Ustochrepts	Eutric Cambisols/Eutric Gleysols	Gujranwala
Therpal	Fluventic Camborthids	Haplic Yermosols	Rawalpindi
Tirnaul	Typic Ustochrepts	Calcaric Cambisols	Rawalpindi, Attock
Waryam	Halic Camborthids	Haplic Yermosols	Multan North
Wazirabad	Udic Haplustalfs	Orthic Luvisols	Gujrat, Sheikhpura, Gujranwala
Yazman	Typic Torripsamments	Calcaric Rhegosols	Bahawalpur
Zahri	Fluventic/Vertic Camborthids	Haplic Yermosols	Bahawalpur



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