

APPENDIX –8a**Soil Quality In The Study Area During Summer 2006**

Sr.No.	Sampling Location :	Nani Khakhar	Desalper	Nana Bhadiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiiali	Navinal
	Date of Sampling :	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006
	Parameters ,units										
1	Apperance	Dark Brown	Dark Brown	Light Brown	Light Brown	Light Brown	Light Brown	Dark Brown	Dark Brown	Light Brown	Dark Brown
2	Texture	Clay Loam	Clay Loam	Silty Clay	Silty Clay	Silty Clay Loam	Clay Loam	Silt Clay	Silty Caly	Silty caly loam	Silty caly loam
3	Sand, %	33.3	31.9	20.1	14.6	23.2	26.9	20.1	22.2	25.4	23.5
4	Silt,%	28.5	27.6	40.3	58.6	36.3	33.3	40.1	42.6	46.3	48.9
5	Clay,%	38.2	40.5	39.6	26.8	40.5	39.8	39.8	35.2	28.3	27.6
6	Organic Matter%	0.853	0.624	0.583	0.439	0.716	0.771	1.03	0.722	0.487	0.179
7	Electric conductivity,ms/cm	0.087	0.233	0.221	0.086	0.134	2.32	0.226	0.101	0.084	0.138
8	Bulk Density .gm/cc	1.298	1.210	1.284	1.351	1.506	0.958	1.236	1.335	1.256	1.276
9	Moisture Content .%	1.4	0.195	1.785	0.0307	0.224	1.065	0.285	0.33	0.039	0.417
10	Porosity%	37.1	45.8	34.3	52.1	86.1	96.5	23.7	43.5	34.1	14.8
11	Nitrogen,mg/gm	0.038	0.031	0.03	0.022	0.029	0.031	0.035	0.028	0.021	0.019
12	Phosphorus mg/gm	0.5	0.48	0.45	0.43	0.56	0.51	0.6	0.35	0.31	0.29
13	Potassuim %	0.6056	0.924	0.3502	0.318	0.408	0.915	0.621	0.44	0.2593	0.4154
14	Sodium Adsorption Ratio	0.037	0.197	0.048	0.00792	0.0514	0.289	0.024	0.0423	0.079	0.024
15	PH(1:10Suspension)	6.96	7.2	7.9	7	7.5	6.8	7.2	7	6.9	7.1
16	Water Holding Capacity.(%)	28.7	18.9	24.4	8.6	16.8	23.4	23.3	27.3	20.9	29.4
17	Permeability,cm/sec.	0.041	0.05	0.053	0.058	0.056	0.051	0.053	0.05	0.051	0.053
18	Sodium (as Na),ppm	95.81	1065	341.7	62.99	389.8	1677	187.4	162.6	61.49	165.3
19	Chloride (as cl) mg/gm	0.091	0.275	0.242	0.048	0.073	4.612	0.218	0.058	0.0613	0.129



Sr.No.	Sampling Location :	Nani Khakhar	Desalper	Nana Bhadiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiya	Navinal
	Date of Sampling :	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006	19/03/2006
	Parameters ,units										
20	Total Alkalinity mg/gm	0.081	0.3	0.374	0.143	0.233	0.133	0.141	0.112	0.087	0.169
21	Iron (as Fe),mg/gm	0.4528	0.0166	0.3735	0.178	1.9072	2.2136	1.6392	0.4889	0.5153	1.0017
22	Cadmium(as Cd)mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Zinc (as Zn),mg/gm	0.5799	0.5963	0.3578	0.004874	0.005107	0.007336	0.008758	0.4785	0.5562	0.4553
24	Copper (as Cu),mg/gm	0.01285	0.01409	0.8671	0.008832	0.01402	0.01627	0.00651	0.01088	0.01186	0.01097
25	Lead (asPb)mg/gm	0.001541	0.001661	0.00111	0.001463	0.000802	0.000976	0.001153	0.001018	0.00085	0.000967
26	Chromium (as Cr+6) mg/gm	0.029	0.03554	0.03697	0.03134	0.04266	0.03723	0.002232	0.01866	0.03187	0.02926

APPENDIX –8b**Soil Quality In The Study Area During Post-Monsoon 2006**

Sampling Location :			Nani Khakhar	Desalpur	Nana Bhudiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiya	Navinal
Date of Sampling :			16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006
Sr. No.	Parameters	Units	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 7	S - 8	S - 9	S - 10
1	Appearance		Light brown	Dark Brown	Dark Brown	Light brown	Dark Brown	Light brown	Dark Brown	Dark Brown	Light brown	Dark Brown
2	Texture		Clay Loam	Clay Loam	Silt Clay	Silty Clay	Clay Loam	Clay Loam	Silt Clay	Silt Clay	Silty Clay Loam	Silty Clay Loam
3	Sand	%	30.4	29.8	25.3	16.9	20.4	23.4	22.8	19.6	23.8	21.9
4	Silt	%	29.3	30.6	45.1	51.6	37.5	34.8	42.9	44.9	45.8	46.9
5	Clay	%	40.3	39.6	29.6	31.5	42.1	41.8	34.3	35.5	30.4	31.2
6	Organic Matter	%	1.213	0.913	0.691	0.762	0.823	0.963	0.916	0.864	0.691	0.583
7	Electrical conductivity	ms/cm	0.169	0.196	0.246	0.186	0.183	1.961	0.388	0.216	0.201	0.219
8	Bulk Density	gm/cm ³	0.916	0.929	0.986	1.1032	1.236	1.116	1.316	1.226	1.168	1.184
9	Moisture	%	0.893	0.361	1.126	0.316	0.306	0.983	0.384	0.416	0.145	0.386
10	Porosity	%	39.8	42.3	30.3	56.3	72.3	81.6	36.8	45.6	37.4	25.1
11	Nitrogen	mg/gm	0.123	0.085	0.041	0.123	0.091	0.216	0.163	0.131	0.143	0.093
12	Phosphorus	mg/gm	0.433	0.365	0.319	0.366	0.481	0.431	0.55	0.48	0.46	0.35
13	Potassium	mg/gm	0.5561	0.7631	0.3110	0.388	0.3961	0.616	0.583	0.3610	0.2163	0.3762
14	Sodium Absorption Ratio		0.212	0.168	0.085	0.71	0.059	0.414	0.163	0.109	0.164	0.093
15	pH (1:10 suspension)		7.10	7.3	7.4	7	7.2	7.0	7.3	7.4	7.1	7.5
16	Water Holding Capacity	%	31.6	28.7	25.3	19.8	25.9	31.9	29.6	33.5	24.6	36.3
17	Permeability	cm/sec	0.056	0.064	0.069	0.068	0.059	0.064	0.066	0.059	0.062	0.06

Sampling Location :			Nani Khakhar	Desalpur	Nana Bhudiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiyali	Navinal
18	Sodium as (Na)	mg/gm	0.138	0.983	0.506	0.123	0.326	1.260	0.216	0.209	0.109	0.138
19	Chlorides as (Cl)	mg/gm	0.186	0.199	0.296	0.134	0.116	6.113	0.363	0.184	0.129	216.3
20	Total Alkalinity	mg/gm	0.123	0.289	0.326	0.266	0.268	0.219	0.225	0.316	0.143	0.316
21	Iron as (Fe)	mg/gm	0.24	0.18	0.22	1.47	0.19	1.80	1.42	0.37	0.49	0.82
22	Cadmium as (Cd)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Zinc as (Zn)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Copper as (Cu)	mg/gm	0.016	0.026	0.061	0.010	0.022	0.018	0.021	0.013	0.016	0.012
25	Lead as (Pb)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26	Chromium as (Cr)	mg/gm	0.035	0.030	0.041	0.038	0.037	0.03	0.025	0.020	0.028	0.022

APPENDIX –8c

Soil Quality In The Study Area During Winter 2006

Sampling Location :			Nani Khakhar	Desalpur	Nana Bhudiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiya	Navinal
Date of Sampling :			16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006	16/11/2006
Sr. No.	Parameters	Units	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 7	S - 8	S - 9	S - 10
1	Appearance		Light brown	Dark Brown	Dark Brown	Light brown	Dark Brown	Light brown	Dark Brown	Dark Brown	Light brown	Dark Brown
2	Texture		Clay Loam	Clay Loam	Silt Clay	Silty Clay	Clay Loam	Clay Loam	Silt Clay	Silt Clay	Silty Clay Loam	Silty Clay Loam
3	Sand	%	29.2	30.1	26.4	19.3	22.6	21.6	20.9	20.8	21.6	20.6
4	Silt	%	28.8	29.7	42.1	50.4	36.8	33.7	41.3	42.3	44.3	45.8
5	Clay	%	42.0	40.2	31.5	30.3	40.6	44.7	37.8	36.9	34.1	33.6
6	Organic Matter	%	1.191	0.968	0.716	0.784	0.839	0.978	0.941	0.886	0.764	0.626
7	Electrical conductivity	ms/cm	0.176	0.208	0.252	0.198	0.199	1.813	0.416	0.243	0.239	0.240
8	Bulk Density	gm/cm ³	0.923	0.941	0.994	1.094	1.196	1.023	1.224	1.196	1.149	1.196
9	Moisture	%	0.911	0.373	1.109	0.328	0.292	0.926	0.416	0.398	0.168	0.374
10	Porosity	%	40.3	43.4	34.6	51.4	65.4	73.4	39.4	41.8	38.6	26.8
11	Nitrogen	mg/gm	0.129	0.093	0.045	0.135	0.116	0.198	0.184	0.146	0.154	0.109
12	Phosphorus	mg/gm	0.396	0.372	0.326	0.353	0.424	0.409	0.513	0.493	0.478	0.376
13	Potassium	mg/gm	0.5433	0.7819	0.326	0.396	0.378	0.594	0.536	0.376	0.224	0.381
14	Sodium Absorption Ratio		0.209	0.179	0.093	0.635	0.050	0.399	0.175	0.163	0.181	0.116
15	pH (1:10 suspension)		7.2	7.4	7.3	7.1	7.3	7.1	7.2	7.2	7.3	7.4
16	Water Holding Capacity	%	32.4	30.4	26.9	21.6	28.7	34.3	30.4	31.8	26.8	35.6
17	Permeability	cm/sec	0.04	0.039	0.041	0.054	0.048	0.053	0.049	0.048	0.049	0.051

Sampling Location :			Nani Khakhar	Desalpur	Nana Bhudiya	Bidada	Kandagra	Wand	Jalpara	Bhojpur	Gundiyali	Navinal
18	Sodium as (Na)	mg/gm	0.129	0.995	0.513	0.136	0.334	1.199	0.242	0.219	0.116	0.143
19	Chlorides as (Cl)	mg/gm	0.194	0.215	0.314	0.146	0.131	0.124	0.349	0.196	0.136	0.209
20	Total Alkalinity	mg/gm	0.134	0.296	0.319	0.281	0.276	0.230	0.241	0.299	0.156	0.303
21	Iron as (Fe)	mg/gm	0.26	0.21	0.25	0.093	0.203	1.35	1.28	0.43	0.53	0.75
22	Cadmium as (Cd)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Zinc as (Zn)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Copper as (Cu)	mg/gm	0.018	0.022	0.072	0.019	0.026	0.023	0.019	0.020	0.022	0.019
25	Lead as (Pb)	mg/gm	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26	Chromium as (Cr)	mg/gm	0.029	0.026	0.038	0.031	0.029	0.02	0.019	0.016	0.023	0.026