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**SUPPLEMENTARY MATERIALS**

## **Assessment of Ca, Mg, and K nutrition in cotton through the base cation saturation ratio approach in southern Turkey\***

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	Soil K	Soil Ca		Soil Mg	Soil K	Soil Ca		Soil Mg	Ca/Mg	Ca/K	Mg/K	%		
		mgkg <sup>-1</sup>	cmolekg <sup>-1</sup>			Soil Ca	Soil Mg					Plant K	Plant Ca	Plant Mg
1	84	1106	749	0.22	5.53	6.24	0.89	25.68	28.98	1.57	2.49	0.46		
2	168	5247	580	0.43	26.24	4.83	5.43	60.90	11.22	0.94	3.99	0.83		
3	256	5280	814	0.66	26.40	6.78	3.89	40.22	10.33	0.74	4.79	0.96		
4	248	5789	762	0.64	28.95	6.35	4.56	45.52	9.99	1.27	4.45	0.71		
5	387	7335	770	0.99	36.68	6.42	5.72	36.96	6.47	0.95	3.67	0.61		
6	238	4988	965	0.61	24.94	8.04	3.10	40.87	13.18	1.1	4.4	0.68		
7	507	6086	651	1.30	30.43	5.43	5.61	23.41	4.17	1.36	3.57	0.66		
8	381	5599	1242	0.98	28.00	10.35	2.70	28.66	10.59	0.91	3.28	0.91		
9	608	6566	1051	1.56	32.83	8.76	3.75	21.06	5.62	1.02	3.96	0.69		
10	513	6132	1066	1.32	30.66	8.88	3.45	23.31	6.75	1.41	4.07	0.91		
11	539	7016	931	1.38	35.08	7.76	4.52	25.38	5.61	1.14	4.22	0.93		
12	513	6935	820	1.32	34.68	6.83	5.07	26.36	5.19	1.41	4.73	0.89		
13	588	7616	1124	1.51	38.08	9.37	4.07	25.26	6.21	1.1	3.41	0.62		
14	354	7178	805	0.91	35.89	6.71	5.35	39.54	7.39	1.7	3.17	0.72		
15	222	5943	396	0.57	29.72	3.30	9.00	52.20	5.80	1.39	3.72	0.64		
16	235	6017	468	0.60	30.09	3.90	7.71	49.93	6.47	1.33	3.51	0.56		
17	467	6994	1313	1.20	34.97	10.94	3.20	29.20	9.14	1.23	4.39	0.97		
18	172	5365	368	0.44	26.83	3.07	8.75	60.82	6.95	0.68	3.83	1.06		
19	231	5984	1106	0.59	29.92	9.22	3.25	50.51	15.56	0.56	4.08	0.99		
20	429	7960	1259	1.10	39.80	10.49	3.79	36.18	9.54	0.49	3.79	1.27		
21	275	7399	762	0.71	37.00	6.35	5.83	52.47	9.01	0.57	4.15	1.07		
22	406	6414	849	1.04	32.07	7.08	4.53	30.81	6.80	0.95	3.34	1.36		
23	448	7615	1223	1.15	38.08	10.19	3.74	33.15	8.87	1.29	3.24	0.63		

	Soil K	Soil Ca		Soil Mg	Soil K	Soil Ca		Soil Mg	Ca/Mg	Ca/K	Mg/K	%		
		mgkg <sup>-1</sup>	Soil Ca			Soil Mg	cmolekg <sup>-1</sup>					Soil Ca	Soil Mg	Plant K
24	312	6103	929	0.80	0.80	30.52	7.74	3.94	38.14	9.68	0.87	4.11	1.15	
25	195	8132	996	0.50	0.50	40.66	8.30	4.90	81.32	16.60	0.49	4.17	1.11	
26	149	4987	1194	0.38	0.38	24.94	9.95	2.51	65.27	26.04	0.94	2.29	0.9	
27	186	4409	1124	0.48	0.48	22.05	9.37	2.35	46.22	19.64	1.96	2.47	0.83	
28	256	5296	1300	0.66	0.66	26.48	10.83	2.44	40.34	16.50	1	3.76	1.05	
29	150	4628	725	0.38	0.38	23.14	6.04	3.83	60.16	15.71	0.86	2.98	0.84	
30	239	5057	901	0.61	0.61	25.29	7.51	3.37	41.26	12.25	0.8	3.32	0.81	
31	475	6655	768	1.22	1.22	33.28	6.40	5.20	27.32	5.25	1.46	2.53	0.51	
32	263	5287	1298	0.67	0.67	26.44	10.82	2.44	39.20	16.04	1.26	3.59	0.95	
33	429	6133	1315	1.10	1.10	30.67	10.96	2.80	27.88	9.96	2.22	3.37	0.74	
34	277	5115	946	0.71	0.71	25.58	7.88	3.24	36.01	11.10	1.25	1.51	0.42	
35	260	5780	522	0.67	0.67	28.90	4.35	6.64	43.35	6.53	1.23	1.91	0.36	
36	376	5523	485	0.96	0.96	27.62	4.04	6.83	28.64	4.19	1.05	4.04	0.66	
37	311	5448	1200	0.80	0.80	27.24	10.00	2.72	34.16	12.54	1.02	1.75	0.51	
38	305	5289	642	0.78	0.78	26.45	5.35	4.94	33.81	6.84	1.83	2.69	0.71	
39	105	3766	535	0.27	0.27	18.83	4.46	4.22	69.94	16.56	0.5	4.24	1.47	
40	305	4469	1122	0.78	0.78	22.35	9.35	2.39	28.57	11.96	2.25	3.11	0.78	
41	449	4691	1316	1.15	1.15	23.46	10.97	2.14	20.37	9.53	1.99	3.1	0.85	
42	514	5659	1586	1.32	1.32	28.30	13.22	2.14	21.47	10.03	0.93	4	1.01	
43	338	5092	1130	0.87	0.87	25.46	9.42	2.70	29.38	10.87	0.68	3.24	0.7	
44	404	4572	1351	1.04	1.04	22.86	11.26	2.03	22.07	10.87	0.73	2.65	0.76	
45	199	4654	645	0.51	0.51	23.27	5.38	4.33	45.60	10.53	1.29	4.9	0.73	
46	192	5200	666	0.49	0.49	26.00	5.55	4.68	52.81	11.27	1.21	4.2	0.75	

	Soil K	Soil Ca		Soil Mg	Soil K	Soil Ca		Soil Mg	Ca/Mg	Ca/K	Mg/K	%		
		mgkg <sup>-1</sup>	cmolekg <sup>-1</sup>			Soil Ca	Soil Mg					Plant K	Plant Ca	Plant Mg
47	267	4134	787	0.68	20.67	6.56	3.15	30.19	9.58	1.93	2.32	0.66		
48	208	5323	919	0.53	26.62	7.66	3.48	49.90	14.36	0.73	3.25	0.99		
49	223	5511	725	0.57	27.56	6.04	4.56	48.19	10.57	1.46	3.27	0.56		
50	147	4923	540	0.38	24.62	4.50	5.47	65.31	11.94	0.92	3.64	0.94		
51	288	5067	842	0.74	25.34	7.02	3.61	34.31	9.50	1.4	2.83	0.67		
52	210	5218	527	0.54	26.09	4.39	5.94	48.45	8.16	0.82	3.44	0.82		
53	182	4933	674	0.47	24.67	5.62	4.39	52.85	12.04	1.02	3.28	0.69		
54	183	4009	642	0.47	20.05	5.35	3.75	42.72	11.40	0.7	3.93	0.96		
55	211	4259	678	0.54	21.30	5.65	3.77	39.36	10.44	1.03	2.87	0.5		
56	232	5071	893	0.59	25.36	7.44	3.41	42.62	12.51	1.25	3.33	0.9		
57	202	4714	1061	0.52	23.57	8.84	2.67	45.51	17.07	0.72	4.26	1.2		
58	377	5647	630	0.97	28.24	5.25	5.38	29.21	5.43	0.81	5.93	0.95		
59	208	4759	775	0.53	23.80	6.46	3.68	44.62	12.11	1.25	3.81	0.96		
60	268	5062	1014	0.69	25.31	8.45	3.00	36.83	12.30	1.14	3.1	0.67		
61	118	5099	442	0.30	25.50	3.68	6.92	84.26	12.17	0.74	3.84	0.89		
62	306	5461	1006	0.78	27.31	8.38	3.26	34.80	10.68	0.79	4.87	0.86		
63	255	5011	844	0.65	25.06	7.03	3.56	38.32	10.76	1.47	4.05	0.8		
64	235	4905	1139	0.60	24.53	9.49	2.58	40.70	15.75	0.94	3.65	1.02		
65	290	4446	1180	0.74	22.23	9.83	2.26	29.90	13.22	1.98	2.4	0.86		
66	472	5345	602	1.21	26.73	5.02	5.33	22.08	4.15	1.16	5.12	0.81		
67	323	5499	925	0.83	27.50	7.71	3.57	33.20	9.31	1.48	3.43	0.76		
68	271	5288	976	0.69	26.44	8.13	3.25	38.05	11.70	1.52	2.92	0.63		
69	333	5678	856	0.85	28.39	7.13	3.98	33.25	8.35	1.18	4.39	0.64		

	Soil K	Soil Ca		Soil Mg	Soil K	Soil Ca		Soil Mg	Ca/Mg	Ca/K	Mg/K	%		
		mgkg <sup>-1</sup>	cmolekg <sup>-1</sup>			Soil Ca	Soil Mg					Plant K	Plant Ca	Plant Mg
70	256	4194	772	0.66	20.97	6.43	3.26	31.95	9.80	2.29	3.25	0.77		
71	361	4785	748	0.93	23.93	6.23	3.84	25.85	6.73	1.9	2.69	0.49		
72	450	4346	1205	1.15	21.73	10.04	2.16	18.83	8.70	1.85	3.69	1.05		
73	224	4674	1252	0.57	23.37	10.43	2.24	40.69	18.17	1.11	3.95	0.71		
74	397	5911	1421	1.02	29.56	11.84	2.50	29.03	11.63	1.76	2.87	0.74		
75	445	5192	1268	1.14	25.96	10.57	2.46	22.75	9.26	1.03	1.92	0.48		
76	325	5326	1344	0.83	26.63	11.20	2.38	31.96	13.44	0.94	4.36	0.81		
77	284	5006	1155	0.73	25.03	9.63	2.60	34.37	13.22	0.98	4.07	0.74		
78	342	5797	1035	0.88	28.99	8.63	3.36	33.05	9.84	1.88	1.79	0.43		
79	429	5294	1524	1.10	26.47	12.70	2.08	24.06	11.55	1.22	3.84	0.9		
80	255	5112	712	0.65	25.56	5.93	4.31	39.09	9.07	2	2.34	0.4		
81	399	5913	539	1.02	29.57	4.49	6.58	28.90	4.39	1.11	4.33	0.86		
82	289	5483	675	0.74	27.42	5.63	4.87	37.00	7.59	1.28	3.93	0.62		
83	219	4352	1104	0.56	21.76	9.20	2.37	38.75	16.38	1.44	3.25	0.97		
84	281	5007	895	0.72	25.04	7.46	3.36	34.75	10.35	1.13	3.71	0.77		
85	131	4610	475	0.34	23.05	3.96	5.82	68.62	11.78	1.92	2.86	0.68		
86	142	5168	615	0.36	25.84	5.13	5.04	70.97	14.08	1.18	2.6	0.65		
87	405	4772	728	1.04	23.86	6.07	3.93	22.98	5.84	1.86	2.64	0.57		
88	240	4681	400	0.62	23.41	3.33	7.02	38.03	5.42	1.59	3.52	0.72		
89	543	4921	869	1.39	24.61	7.24	3.40	17.67	5.20	1.53	4.96	0.71		
90	357	4108	408	0.92	20.54	3.40	6.04	22.44	3.71	0.66	4.15	1.13		
91	158	4472	658	0.41	22.36	5.48	4.08	55.19	13.53	0.78	4.67	0.99		
92	238	5806	732	0.61	29.03	6.10	4.76	47.57	10.00	0.7	4.65	0.74		

	Soil K	Soil Ca		Soil Mg	Soil K	Soil Ca		Soil Mg	Ca/Mg	Ca/K	Mg/K	Plant K	Plant Ca		Plant Mg
		mgkg <sup>-1</sup>	mgkg <sup>-1</sup>			cmolekg <sup>-1</sup>	cmolekg <sup>-1</sup>						%	%	
93	387	5364	1046	0.99	0.99	26.82	8.72	3.08	27.03	8.78	1.83	5.24	0.72		
94	387	4628	322	0.99	0.99	23.14	2.68	8.62	23.32	2.70	0.91	5.58	0.59		
95	358	6036	928	0.92	0.92	30.18	7.73	3.90	32.88	8.42	0.94	6.08	0.77		
96	484	6243	503	1.24	1.24	31.22	4.19	7.45	25.15	3.38	1.47	5.64	0.65		
97	310	4666	523	0.79	0.79	23.33	4.36	5.35	29.35	5.48	1.32	3.79	0.78		
98	327	6389	1006	0.84	0.84	31.95	8.38	3.81	38.10	10.00	1.22	4.24	0.68		