

San Juan Area, Puerto Rico  
 Chemical Properties of the Soils

02/13/2002

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
			meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>AaB:</b>									
Aceitunas-----	H1	0-8	---	3.0-6.0	3.5-5.5	0	0	0	0
	H2	8-60	---	25-30	3.5-5.5	0	0	0	0
<b>AaC:</b>									
Aceitunas-----	H1	0-8	---	3.0-6.0	3.5-5.5	0	0	0	0
	H2	8-60	---	25-30	3.5-5.5	0	0	0	0
<b>AbD:</b>									
Aibonito-----	H1	0-7	---	12-15	3.5-5.5	0	0	0	0
	H2	7-43	---	15-17	3.5-5.5	0	0	0	0
	H3	43-99	---	17-19	3.5-5.5	0	0	0	0
<b>AbE:</b>									
Aibonito-----	H1	0-7	---	12-15	3.5-5.5	0	0	0	0
	H2	7-43	---	15-17	3.5-5.5	0	0	0	0
	H3	43-99	---	17-19	3.5-5.5	0	0	0	0
<b>AmB:</b>									
Almirante-----	H1	0-7	---	5.0-7.0	3.5-5.5	0	0	0	0
	H2	7-60	---	3.0-5.0	3.5-5.5	0	0	0	0
<b>AmC:</b>									
Almirante-----	H1	0-7	---	5.0-7.0	3.5-5.5	0	0	0	0
	H2	7-60	---	3.0-5.0	3.5-5.5	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>Ba:</b>									
Bajura-----	H1	0-6	30-40	---	5.6-6.5	0	0	0	0
	H2	6-60	25-35	---	5.6-6.5	0	0	0	0
<b>BmB:</b>									
Bayamon-----	H1	0-66	---	3.0-15	4.5-5.5	0	0	0	0
	H2	66-70	---	4.0-14	4.5-5.5	0	0	0	0
<b>CaE:</b>									
Caguabo-----	H1	0-4	25-40	---	6.1-6.5	0	0	0	0
	H2	4-10	25-40	---	6.1-6.5	0	0	0	0
	H3	10-16	---	---	---	---	---	---	---
	H4	16-20	---	---	---	---	---	---	---
<b>CaF:</b>									
Caguabo-----	H1	0-4	25-40	---	6.1-6.5	0	0	0	0
	H2	4-10	25-40	---	6.1-6.5	0	0	0	0
	H3	10-16	---	---	---	---	---	---	---
	H4	16-20	---	---	---	---	---	---	---
<b>CbF:</b>									
Caguabo-----	H1	0-4	25-40	---	6.1-6.5	0	0	0	0
	H2	4-10	25-40	---	6.1-6.5	0	0	0	0
	H3	10-16	---	---	---	---	---	---	---
	H4	16-20	---	---	---	---	---	---	---
Rock Outcrop--	H1	0-60	---	---	---	---	---	---	---
<b>Ce:</b>									
Candelero-----	H1	0-6	---	15-20	3.5-5.0	0	0	0	0
	H2	6-35	---	22-29	4.5-5.5	0	0	0	0
	H3	35-60	47-64	---	5.6-6.5	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
Cayagua-----		---	---	---	---	---	---	---	---
CLC:									
Catalina-----	H1	0-6	---	8.0-12	4.5-6.0	0	0	0	0
	H2	6-84	---	3.0-8.0	4.5-6.0	0	0	0	0
	H3	84-99	---	6.0-10	4.5-6.0	0	0	0	0
Cn:									
Catano-----	H1	0-7	2.0-10	---	7.9-8.4	10-50	0	0	0
	H2	7-58	0.0-10	---	7.9-8.4	10-50	0	0	0
Co:									
Cayagua-----	H1	0-8	---	10-15	5.1-5.5	0	0	0	0
	H2	8-22	---	20-24	4.5-5.5	0	0	0	0
	H3	22-60	24-29	---	4.5-7.3	0	0	0	0
CrD2:									
Colinas-----	H1	0-26	25-37	---	7.9-8.4	40-70	0	0	0
	H2	26-52	---	---	---	0	0	0	0
CrE2:									
Colinas-----	H1	0-26	25-37	---	7.9-8.4	40-70	0	0	0
	H2	26-52	---	---	---	0	0	0	0
CrF2:									
Colinas-----	H1	0-26	25-37	---	7.9-8.4	40-70	0	0	0
	H2	26-52	---	---	---	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>Cs:</b>									
Coloso-----	H1	0-16	20-30	---	5.6-6.5	0	0	0	0
	H2	16-70	20-28	---	5.6-6.5	0	0	0	0
<b>CuE:</b>									
Consumo-----	H1	0-10	---	9.0-17	4.5-5.0	0	0	0	0
	H2	10-20	---	9.0-17	4.5-5.0	0	0	0	0
	H3	20-46	---	8.0-19	4.5-5.0	0	0	0	0
<b>CuF:</b>									
Consumo-----	H1	0-10	---	9.0-17	4.5-5.0	0	0	0	0
	H2	10-20	---	9.0-17	4.5-5.0	0	0	0	0
	H3	20-46	---	8.0-19	4.5-5.0	0	0	0	0
<b>CzC:</b>									
Corozal-----	H1	0-9	---	20-25	4.5-5.0	0	0	0	0
	H2	9-40	---	12-28	4.5-5.0	0	0	0	0
	H3	40-60	---	32-35	4.5-5.0	0	0	0	0
<b>DaC:</b>									
Daguey-----	H1	0-10	---	5.0-20	4.5-5.5	0	0	0	0
	H2	10-72	---	6.0-23	4.5-5.5	0	0	0	0
	H3	72-90	---	7.0-12	4.5-5.5	0	0	0	0
<b>DaD:</b>									
Daguey-----	H1	0-10	---	5.0-20	4.5-5.5	0	0	0	0
	H2	10-72	---	6.0-23	4.5-5.5	0	0	0	0
	H3	72-90	---	7.0-12	4.5-5.5	0	0	0	0



Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>Hm:</b>									
Humacao-----	H1	0-8	30-50	---	5.1-6.0	0	0	0	0
	H2	8-60	25-45	---	5.1-6.0	0	0	0	0
<b>HtE:</b>									
Humatas-----	H1	0-5	---	9.0-17	4.5-5.5	0	0	0	0
	H2	5-24	---	3.0-14	4.5-5.5	0	0	0	0
	H3	24-60	---	3.0-17	4.5-5.5	0	0	0	0
<b>HtF:</b>									
Humatas-----	H1	0-5	---	9.0-17	4.5-5.5	0	0	0	0
	H2	5-24	---	3.0-14	4.5-5.5	0	0	0	0
	H3	24-60	---	3.0-17	4.5-5.5	0	0	0	0
<b>HuF:</b>									
Humatas-----	H1	0-5	---	9.0-17	4.5-5.5	0	0	0	0
	H2	5-24	---	3.0-14	4.5-5.5	0	0	0	0
	H3	24-60	---	3.0-17	4.5-5.5	0	0	0	0
Rock Outcrop--	H1	0-60	---	---	---	---	---	---	---
<b>Hy:</b>									
Hydraquents---	H1	0-60	---	---	6.1-7.8	---	---	16.0-32.0	---
<b>JaE2:</b>									
Jagueyes-----	H1	0-5	---	10-12	3.5-5.5	0	0	0	0
	H2	5-41	---	7.0-22	3.5-5.5	0	0	0	0
	H3	41-62	---	11-24	3.5-5.5	0	0	0	0
	H4	62-66	---	28-47	3.5-5.5	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>JnD2:</b>									
Juncal-----	H1	0-10	24-30	---	5.6-6.5	0	0	0	0
	H2	10-48	24-30	---	7.4-8.4	0	0	0	0
	H3	48-60	20-28	---	8.5-9.0	0	0	0	0
<b>JuC:</b>									
Juncos-----	H1	0-31	40-50	---	5.6-7.3	0	0	0	0
	H2	31-40	40-50	---	6.1-7.3	0	0	0	0
	H3	40-44	---	---	---	---	---	---	---
<b>JuD:</b>									
Juncos-----	H1	0-31	40-50	---	5.6-7.3	0	0	0	0
	H2	31-40	40-50	---	6.1-7.3	0	0	0	0
	H3	40-44	---	---	---	---	---	---	---
<b>LaB:</b>									
Lares-----	H1	0-36	---	25-29	4.5-5.5	0	0	0	0
	H2	36-60	---	29-31	4.5-5.5	0	0	0	0
<b>LaC2:</b>									
Lares-----	H1	0-36	---	25-29	4.5-5.5	0	0	0	0
	H2	36-60	---	29-31	4.5-5.5	0	0	0	0
<b>LmE:</b>									
Limones-----	H1	0-7	---	2.0-21	3.5-5.0	0	0	0	0
	H2	7-41	---	3.0-22	3.5-5.0	0	0	0	0
	H3	41-48	---	12-14	3.5-5.0	0	0	0	0
	H4	48-79	---	11-16	3.5-5.0	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>LmF:</b>									
Limones-----	H1	0-7	---	2.0-21	3.5-5.0	0	0	0	0
	H2	7-41	---	3.0-22	3.5-5.0	0	0	0	0
	H3	41-48	---	12-14	3.5-5.0	0	0	0	0
	H4	48-72	---	11-16	3.5-5.0	0	0	0	0
<b>LoF2:</b>									
Lirios-----	H1	0-4	---	18-24	4.5-5.5	0	0	0	0
	H2	4-34	---	10-18	4.5-5.5	0	0	0	0
	H3	34-60	---	7.0-10	4.5-5.5	0	0	0	0
<b>LsE:</b>									
Los Guineos---	H1	0-60	---	12-23	3.5-5.0	0	0	0	0
	H2	60-64	---	3.0-6.0	3.5-5.0	0	0	0	0
<b>LsF:</b>									
Los Guineos---	H1	0-60	---	12-23	3.5-5.0	0	0	0	0
	H2	60-64	---	3.0-6.0	3.5-5.0	0	0	0	0
<b>MaA:</b>									
Mabi-----	H1	0-24	25-35	---	4.5-6.5	0	0	0	0
	H2	24-99	30-41	---	6.6-8.4	0	0	0	0
<b>MaB:</b>									
Mabi-----	H1	0-24	25-35	---	4.5-6.5	0	0	0	0
	H2	24-99	30-41	---	6.6-8.4	0	0	0	0
<b>MaC:</b>									
Mabi-----	H1	0-24	25-35	---	4.5-6.5	0	0	0	0
	H2	24-99	30-41	---	6.6-8.4	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>Md:</b> Made Land-----		---	---	---	---	---	---	---	---
<b>MLF:</b> Malaya-----	H1	0-6	18-26	---	5.6-6.5	0	0	0	0
	H2	6-13	18-28	---	6.6-8.4	0	0	0	0
	H3	13-18	18-26	---	6.6-8.4	0	0	0	0
	H4	18-22	---	---	---	---	---	---	---
<b>MoF:</b> Maricao-----	H1	0-6	---	12-23	3.5-5.0	0	0	0	0
	H2	6-22	---	10-20	3.5-5.0	0	0	0	0
	H3	22-60	---	8.0-12	3.5-5.0	0	0	0	0
<b>Mp:</b> Martin Pena---	H1	0-8	175-200	---	7.4-7.8	0	0	0	0
	H2	8-18	30-50	---	6.6-7.8	0	0	0	0
	H3	18-63	30-40	---	6.6-7.8	0	0	0	0
<b>MsB:</b> Matanzas-----	H1	0-20	12-21	---	5.6-7.3	0	0	0	0
	H2	20-53	7.0-10	---	5.6-7.3	0	0	0	0
	H3	53-57	---	---	---	---	---	---	---
<b>MtB:</b> Monte grande---	H1	0-7	30-45	---	5.1-6.5	0	0	0	0
	H2	7-29	40-45	---	5.1-7.8	0	0	0	0
	H3	29-48	41-45	---	7.4-8.4	0	0	0	0



Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>NaD2:</b>									
Naranjito-----	H1	0-4	---	9.0-17	3.5-5.5	0	0	0	0
	H2	4-12	---	9.0-17	3.5-5.5	0	0	0	0
	H3	12-40	---	3.0-14	3.5-5.5	0	0	0	0
	H4	40-44	---	---	---	---	---	---	---
<b>NaE2:</b>									
Naranjito-----	H1	0-4	---	9.0-17	3.5-5.5	0	0	0	0
	H2	4-12	---	9.0-17	3.5-5.5	0	0	0	0
	H3	12-40	---	3.0-14	3.5-5.5	0	0	0	0
	H4	40-44	---	---	---	---	---	---	---
<b>NaF2:</b>									
Naranjito-----	H1	0-4	---	9.0-17	3.5-5.5	0	0	0	0
	H2	4-12	---	9.0-17	3.5-5.5	0	0	0	0
	H3	12-40	---	3.0-14	3.5-5.5	0	0	0	0
	H4	40-44	---	---	---	---	---	---	---
<b>PaD:</b>									
Pandura-----	H1	0-7	15-19	---	5.1-6.5	0	0	0	0
	H2	7-26	12-15	---	5.1-6.5	0	0	0	0
	H3	26-60	---	---	5.1-6.0	---	---	0	---
<b>PaE:</b>									
Pandura-----	H1	0-7	15-19	---	5.1-6.5	0	0	0	0
	H2	7-26	12-15	---	5.1-6.5	0	0	0	0
	H3	26-60	---	---	5.1-6.0	---	---	0	---

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>PaF:</b>									
Pandura-----	H1	0-7	15-19	---	5.1-6.5	0	0	0	0
	H2	7-26	12-15	---	5.1-6.5	0	0	0	0
	H3	26-60	---	---	5.1-6.0	---	---	0	---
<b>PeF:</b>									
Pellejas-----	H1	0-4	---	31-45	4.5-5.5	0	0	0	0
	H2	4-16	---	22-39	4.5-5.5	0	0	0	0
	H3	16-42	---	15-20	4.5-5.5	0	0	0	0
	H4	42-60	---	5.0-20	4.5-5.5	0	0	0	0
<b>Re:</b>									
Reilly-----	H1	0-7	15-20	---	5.6-6.5	0	0	0	0
	H2	7-18	1.0-10	---	5.6-6.5	0	0	0	0
	H3	18-55	1.0-10	---	5.6-6.5	0	0	0	0
<b>RoB:</b>									
Rio Arriba----	H1	0-8	9.0-11	---	5.6-7.8	0	0	0	0
	H2	8-60	9.0-15	---	5.6-7.8	0	0	0	0
<b>RoC2:</b>									
Rio Arriba----	H1	0-8	9.0-11	---	5.6-7.8	0	0	0	0
	H2	8-60	9.0-15	---	5.6-7.8	0	0	0	0
<b>RpD2:</b>									
Rio Piedras----	H1	0-8	---	28-32	3.5-5.5	0	0	0	0
	H2	8-28	---	24-30	3.5-5.5	0	0	0	0
	H3	28-48	---	24-30	3.5-5.5	0	0	0	0
	H4	48-52	---	---	---	0	0	0	0



Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
<b>SoF:</b>									
Soller-----	H1	0-5	22-30	---	7.9-8.4	0-2	0	0	0
	H2	5-12	25-40	---	7.9-8.4	1-5	0	0	0
	H3	12-24	---	---	---	---	---	---	---
	H4	24-28	---	---	---	---	---	---	---
<b>TaF:</b>									
Tanama-----	H1	0-14	25-40	---	6.1-6.5	0	0	0	0
	H2	14-18	---	---	---	---	---	---	---
Rock Outcrop--	H1	0-60	---	---	---	---	---	---	---
<b>To:</b>									
Toa-----	H1	0-8	23-27	---	5.1-7.3	0	0	0	0
	H2	8-16	21-27	---	5.1-7.3	0	0	0	0
	H3	16-60	20-30	---	6.6-7.8	0	0	0	0
<b>TrB:</b>									
Torres-----	H1	0-10	---	3.0-10	4.5-5.5	0	0	0	0
	H2	10-28	---	3.0-10	4.5-5.5	0	0	0	0
	H3	28-64	---	15-24	4.5-5.5	0	0	0	0
<b>Ts:</b>									
Tropopsamments	H1	0-60	0.0-10	---	7.9-8.4	10-15	0	0.0-2.0	0
<b>Ud:</b>									
Urban Land----	H1	0-6	---	---	---	---	---	0	---
Durados-----	H1	0-14	20-24	---	6.6-7.3	0	0	0	0
	H2	14-23	10-15	---	7.9-8.4	0	0	0	0
	H3	23-60	10-12	---	7.9-8.4	0	0	0	0

Chemical Properties of the Soils--Continued

Map symbol and soil name	Horizon	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		In	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
Um:									
Urban Land----	H1	0-6	---	---	---	---	---	0	---
Mucara-----	H1	0-5	---	---	5.6-7.3	---	---	0	---
	H2	5-12	---	---	5.6-7.3	---	---	0	---
	H3	12-30	---	---	---	---	---	---	---
	H4	30-34	---	---	---	---	---	---	---
Us:									
Urban Land----	H1	0-6	---	---	---	---	---	0	---
Sabana Seca---	H1	0-10	---	11-17	3.5-5.0	0	0	0	0
	H2	10-70	---	10-17	3.5-5.0	0	0	0	0
Uv:									
Urban Land----	H1	0-6	---	---	---	---	---	0	---
Vega Alta-----	H1	0-8	---	15-24	5.1-5.5	0	0	0	0
	H2	8-84	---	13-25	4.5-5.5	0	0	0	0
VaB:									
Vega Alta-----	H1	0-8	---	15-24	5.1-5.5	0	0	0	0
	H2	8-84	---	13-25	4.5-5.5	0	0	0	0
VaC2:									
Vega Alta-----	H1	0-8	---	15-24	5.1-5.5	0	0	0	0
	H2	8-84	---	13-25	4.5-5.5	0	0	0	0

