

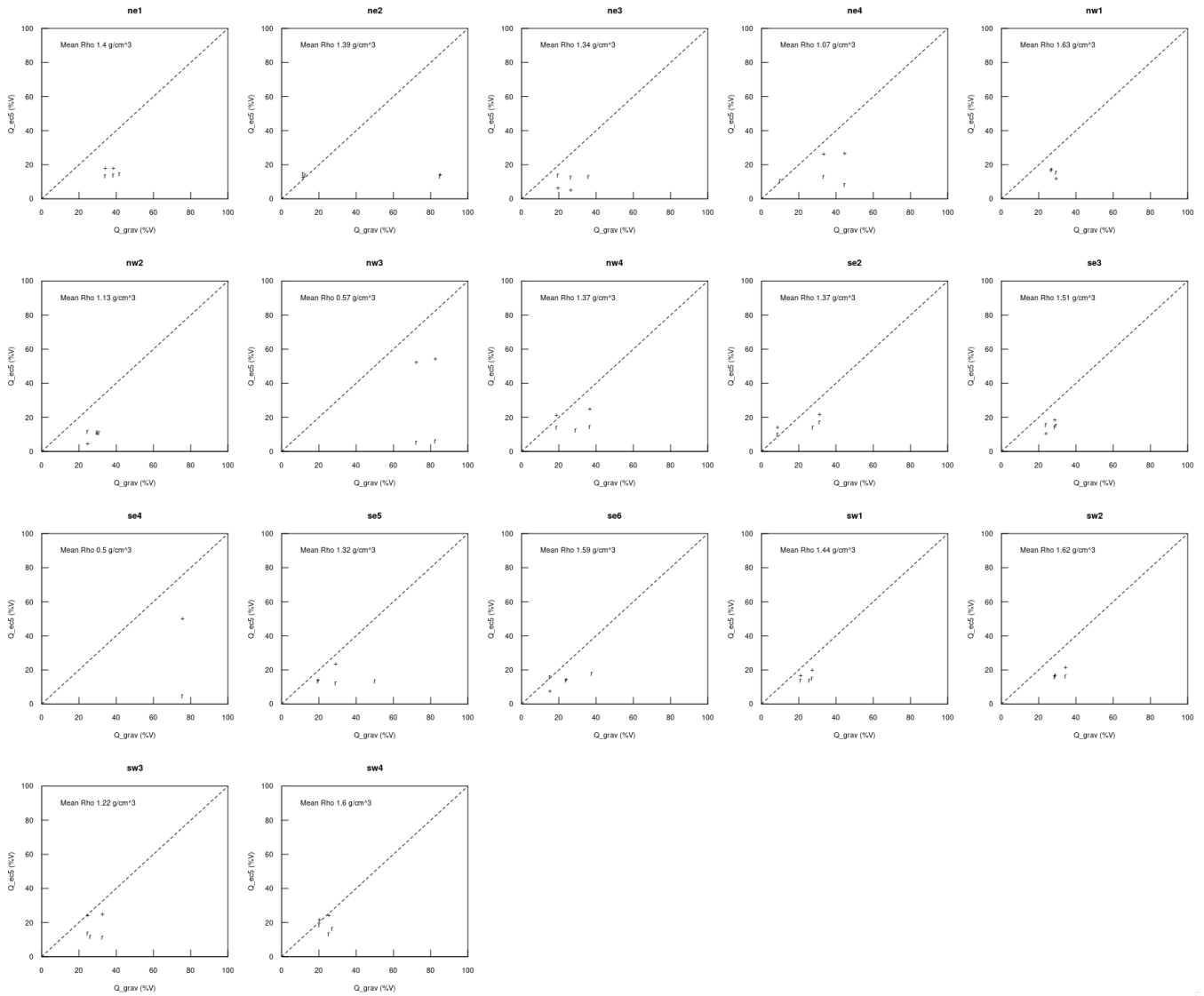
Gravimetric samples

Just starting our standard table... Note that I have R code that can now directly read this from its shared URL!

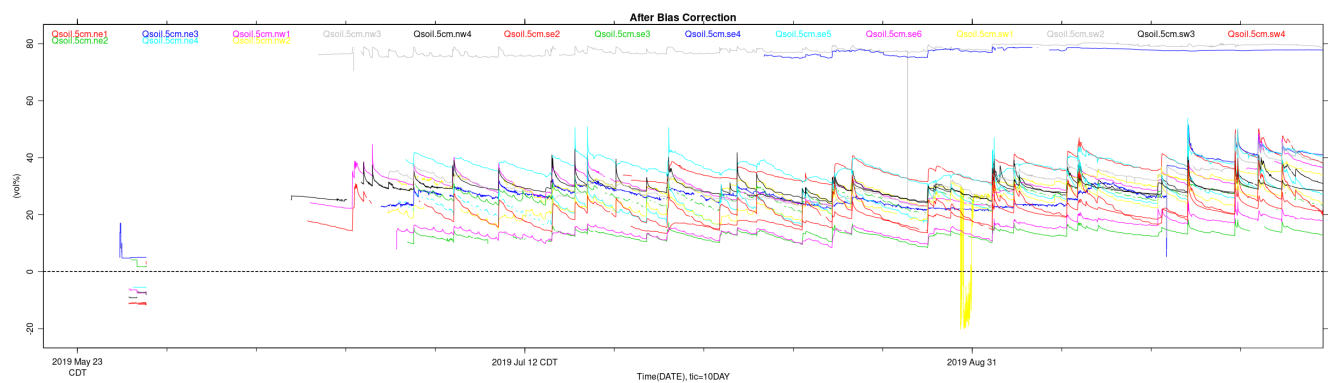
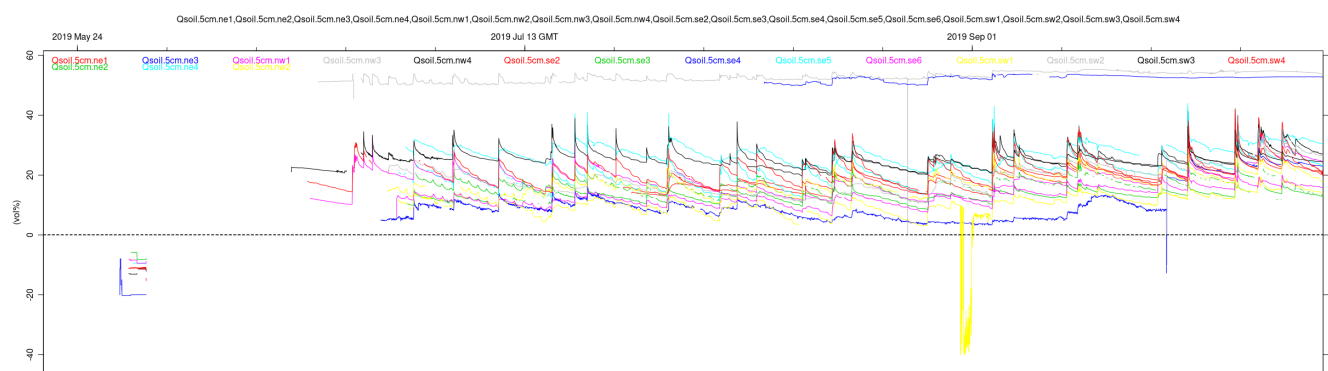
Date	Time	Site	Tin	Tare	Wet	Dry	Qsoil	Comments
8/19	1204	sw1	2	13.8	105.7	91.83	17.05	
8/19	1226	sw2	3	13.9	123.8	104.8	16.90	
8/19	1135	sw3	1	13.6	95.35	73.8	25.20	
8/19	1256	sw4	4	13.7	105.7	88.8	24.22	
8/21	0938	ne1	1	13.6	117.7	92.2	17.96	
8/21	1043	ne2	4	13.7	106.1	98.5	12.81	
8/21	1003	ne3	2	13.8	106.4	93.38	6.55	
8/21	1026	ne4	3	13.9	109.1	87	26.34	
8/24	1228	nw1	1	21.05	122.21	102.74	12.21	assume tare from earlier readings
8/24	1311	nw3	2	21.25	82.94	34.97	52.4	
8/24	1535	nw2	3	21.68	92.84	76.60	4.80	
8/24	1626	nw4	4	21.18	106.42	93.87	21.23	
8/26	0933	se6	1	21.03	114.26	104.24	7.82	
8/26	1045	se4	2	21.28	81.61	31.51	50.17	
8/26	1118	se3	3	21.68	118.93	103.00	10.84	assumed tare
8/26	1404	se5	4	8.27	102.78	89.93	13.88	transferred to foil tray to reuse 4
8/26	1658	se2	4	21.06	71.52	65.78	14.42	
9/6	1058	se2	1	21.08	135.73	115.05	21.9	
9/6	1124	ne3	3	21.25	102.95	85.51	5.5	
9/6	1147	ne2	4	21.13	142.54	86.04	14.5	
9/7	0906	sw2	1	21.13	131.12	108.24	21.542	
9/7	0936	se5	2	21.23	101.85	82.72	23.531	
9/7	1001	se3	3	21.41	115.64	96.64	18.471	
9/7	1017	se6	4	21.12	109.19	93.40	14.473	
9/8	1107	nw2	1	21.12	95.45	75.74	10.742	
9/8	1129	nw4	2	21.23	121.05	96.61	24.836	
9/8	1236	se4	3	21.33	103.0	34.60	53.6	mote not giving good data when we took sample
9/8	1304	sw4	4	21.11	135.61	122.23	21.848	
9/9	1026	ne4	1	21.00	84.40	54.71	26.75	
9/9	1104	sw3	2	21.15	107.66	91.37	24.129	
9/9	1130	nw3	3	21.19	96.21	41.37	54.36	
9/9	1520	nw1	4	21.05	131.26	113.54	17.182	
9/10	1059	ne1	1	21.13	112.03	89.36	18.028	removed 1.06g worm
9/10	1131	sw1	2	21.27	119.49	101.37	20.103	
9/29	1005	ne4	1	21.10	77.48	70.76		roots in sample; forgot to weigh dry with lid, so have added 7.5g
9/29	1019	ne2	2	21.19	101.45	92.96		actually 2–5 cm
9/29	1405	sw3	3	21.37	94.92	77.60		
9/29	1430	sw1	4	21.13	109.90	92.89		
9/30	1044	se2	1	21.00	111.39	93.08		
9/30	1102	se5	2	21.19	123.80	90.61		assumed tare from above
9/30	1140	se6	3	21.37	143.82	118.77		
10/1	1144	nw2	2	21.22	92.53	72.00		
10/1	1208	ne3	1	21.12	111.41	87.63		
10/1	1328	sw4	3	21.43	126.18	108.15		
10/1	1354	se3	4	21.10	121.53	102.00		
10/2	0926	nw4	1	21.00	101.56	82.2		
10/2	0951	ne1	2	21.16	125.49	97.83		
10/2	1116	sw2	3	21.37	129.00	109.8		

The results of my analysis. The bulk densities have a reasonable spread, with the tussock sites (nw3, se4) clearly much lower. The EC-5 biases are generally larger than expected, though a few are quite small. Perhaps the soil chemistry is not what the EC-5 expects? Here, both tussock sites appear as -25% biases, though the EC5 manual suggests that a quadratic correction would be more appropriate (though I don't know how to calculate yet).

Site	Rho_dry (g/cm ³)	EC-5 bias (%)
nw1	1.63	-12
nw2	1.13	-20
nw3	0.57	-25
nw4	1.37	-4
ne1	1.40	-18
ne2	1.39	0
ne3	1.34	-18
ne4	1.07	-10
sw1	1.44	-6
sw2	1.62	-12
sw3	1.22	-4
sw4	1.60	0
se2	1.37	0
se3	1.51	-10
se4	0.50	-25
se5	1.32	-4
se6	1.59	-2



Using these biases, I get the following plot. Not sure how to judge if we've improved things (though could look at TP01 data).



CHEESEHEAD

NCAR 1629 On 16 2019 CDT