

Harvard Forest Data Archive HF293-03

Data File:

Name = hf293-03-soil-temp-water.csv  
Description = soil temperature and water content  
Rows = 109361 Columns = 62  
MD5 checksum = 55454888f86a7467ab1d7c6610c82e7b

Variables:

datetime = date and time (EST)  
year = year (EST)  
hour = hour (EST) (number)  
minute = minute (EST) (number)  
paneltemp1 = datalogger panel temperature in control box 1  
(chambers  
#1-6) (celsius)  
battvolt1 = datalogger voltage in control box 1 (chambers #1-6)  
(volt)  
paneltemp2 = datalogger panel temperature in control box 2  
(chambers  
#7-12) (celsius)  
battvolt2 = datalogger voltage in control box 2 (chambers #7-12)  
(volt)  
tsoil1 = soil temperature at chamber 1 (celsius)  
tsoil2 = soil temperature at chamber 2 (celsius)  
tsoil3 = soil temperature at chamber 3 (celsius)  
tsoil4 = soil temperature at chamber 4 (celsius)  
tsoil5 = soil temperature at chamber 5 (celsius)  
tsoil6 = soil temperature at chamber 6 (celsius)  
tsoil7 = soil temperature at chamber 7 (celsius)  
tsoil8 = soil temperature at chamber 8 (celsius)  
tsoil9 = soil temperature at chamber 9 (celsius)  
tsoil10 = soil temperature at chamber 10 (celsius)  
tsoil11 = soil temperature at chamber 11 (celsius)  
tsoil12 = soil temperature at chamber 12 (celsius)  
swc1 = Soil water content at the top of the mineral horizon for  
control box 1  
measured with CS616 probe (m3 m-3) (dimensionless)  
swc2 = soil water content at the top of the mineral horizon for  
control box 1  
measured with CS616 probe (m3 m-3) (dimensionless)  
swc3 = soil water electric signal (NOT converted to water content)  
at 2-cm depth  
in the organic horizon for control box 1 measured  
using homemade sensor (volt)  
swc4 = soil water electric signal (NOT converted to water content)  
at 2-cm depth  
in the organic horizon for control box 1 measured  
using homemade sensor (volt)  
swc5 = soil water electric signal (NOT converted to water content)  
at 2-cm depth  
in the organic horizon for control box 1 measured  
using homemade sensor (volt)  
swc6 = soil water electric signal (NOT converted to water content)  
at 2-cm depth  
in the organic horizon for control box 1 measured  
using homemade sensor (volt)

swc7 = Soil water content at the top of the mineral horizon for control box 2  
measured with CS616 probe (m3 m-3) (dimensionless)  
swc8 = soil water content at the top of the mineral horizon for control box 2  
measured with CS616 probe (m3 m-3) (dimensionless)  
swc9 = soil water electric signal (NOT converted to water content) at 2-cm depth  
in the organic horizon for control box 2 measured using homemade sensor (volt)  
swc10 = soil water electric signal (NOT converted to water content) at 2-cm depth  
in the organic horizon for control box 2 measured using homemade sensor (volt)  
swc11 = soil water electric signal (NOT converted to water content) at 2-cm depth  
in the organic horizon for control box 2 measured using homemade sensor (volt)  
swc12 = soil water electric signal (NOT converted to water content) at 2-cm depth  
in the organic horizon for control box 2 measured using homemade sensor (volt)  
tsoil1gf = gap-filled soil temperature at chamber 1 (celsius)  
tsoil2gf = gap-filled soil temperature at chamber 2 (celsius)  
tsoil3gf = gap-filled soil temperature at chamber 3 (celsius)  
tsoil4gf = gap-filled soil temperature at chamber 4 (celsius)  
tsoil5gf = gap-filled soil temperature at chamber 5 (volt)  
tsoil6gf = gap-filled soil temperature at chamber 6 (volt)  
tsoil7gf = gap-filled soil temperature at chamber 7 (celsius)  
tsoil8gf = gap-filled soil temperature at chamber 8 (celsius)  
tsoil9gf = gap-filled soil temperature at chamber 9 (celsius)  
tsoil10gf = gap-filled soil temperature at chamber 10 (celsius)  
tsoil11gf = gap-filled soil temperature at chamber 11 (celsius)  
tsoil12gf = gap-filled soil temperature at chamber 12 (celsius)  
swc1gf = gap-filled soil water content at the top of the mineral horizon for control box 1 measured with CS616 probe (m3 m-3) (dimensionless)  
swc2gf = gap-filled soil water content at the top of the mineral horizon for control box 1 measured with CS616 probe (m3 m-3) (dimensionless)  
swc3gf = gap-filled soil water electric signal (NOT converted to water content) at 2-cm depth in the organic horizon for control box 1 measured using homemade sensor (volt)  
swc4gf = gap-filled soil water electric signal (NOT converted to water content) at 2-cm depth in the organic horizon for control box 1 measured using homemade sensor (volt)  
swc5gf = gap-filled soil water electric signal (NOT converted to water content) at 2-cm depth in the organic horizon for control box 1 measured using homemade sensor (volt)  
swc6gf = gap-filled soil water electric signal (NOT converted to water content) at 2-cm depth in the organic horizon for control box 1 measured using homemade sensor (volt)  
swc7gf = gap-filled soil water content at the top of the mineral horizon for control box 2 measured with CS616 probe (m3 m-3) (dimensionless)  
swc8gf = gap-filled soil water content at the top of the mineral horizon for control box 2 measured with CS616 probe (m3 m-3) (dimensionless)

swc9gf = gap-filled soil water electric signal (NOT converted to water content) at  
2-cm depth in the organic horizon for control box 2  
measured using homemade  
sensor (volt)

swc10gf = gap-filled soil water electric signal (NOT converted to water content) at  
2-cm depth in the organic horizon for control box 2  
measured using homemade  
sensor (volt)

swc11gf = gap-filled soil water electric signal (NOT converted to water content) at  
2-cm depth in the organic horizon for control box 2  
measured using homemade  
sensor (volt)

swc12gf = gap-filled soil water electric signal (NOT converted to water content) at  
2-cm depth in the organic horizon for control box 2  
measured using homemade  
sensor (volt)

swc1gf\_corr = gap-filled soil water content at the top of the mineral horizon for control box 1 measured with CS616 probe, corrected (see methods for details)(m<sup>3</sup> m<sup>-3</sup>) (dimensionless)

swc2gf\_corr = gap-filled soil water content at the top of the mineral horizon for control box 1 measured with CS616 probe, corrected (see methods for details)(m<sup>3</sup> m<sup>-3</sup>) (dimensionless)

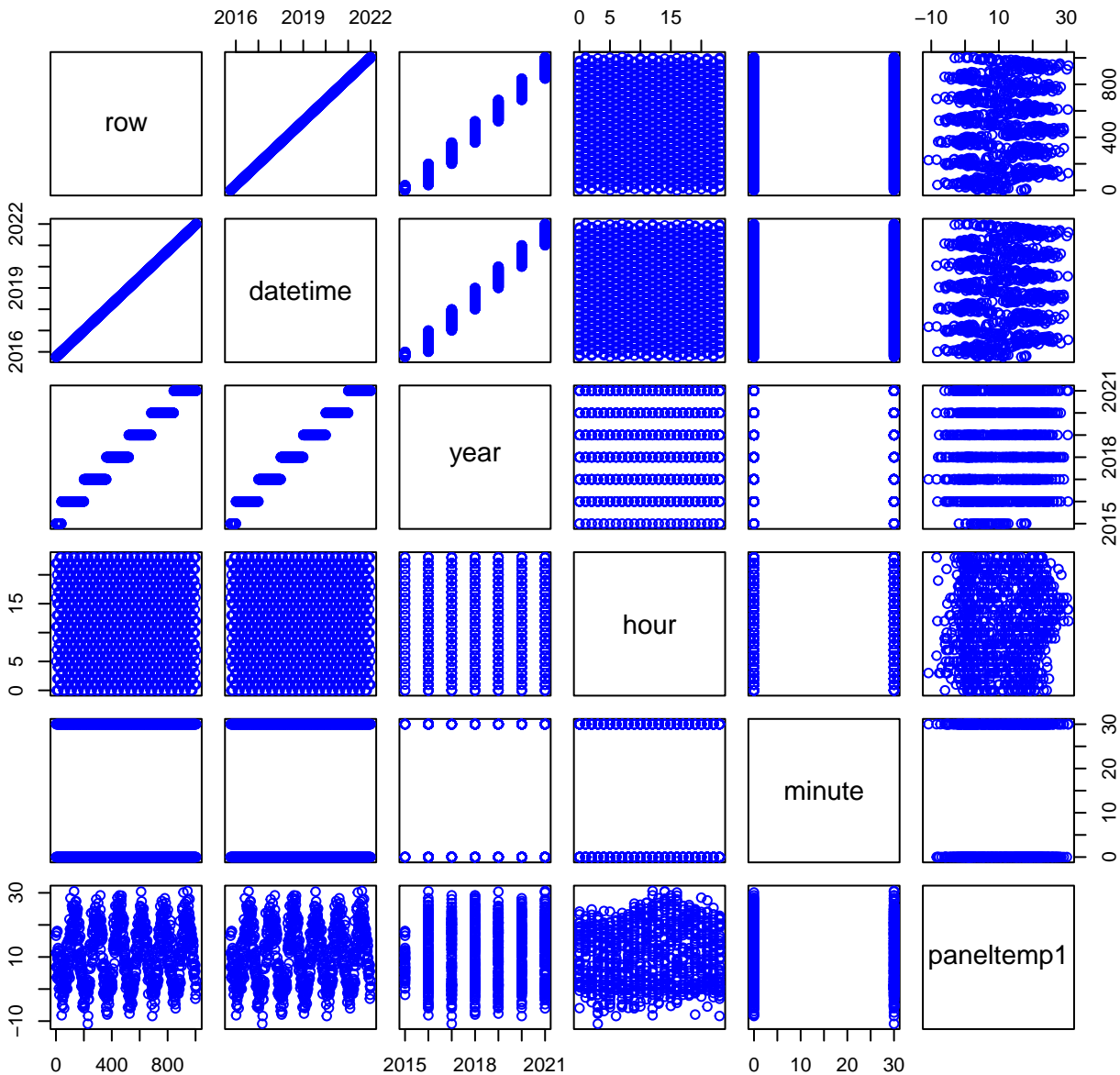
swc7gf\_corr = gap-filled soil water content at the top of the mineral horizon for control box 2 measured with CS616 probe, corrected (see methods for details)(m<sup>3</sup> m<sup>-3</sup>) (dimensionless)

swc8gf\_corr = gap-filled soil water content at the top of the mineral horizon for control box 1 measured with CS616 probe, corrected (see methods for details)(m<sup>3</sup> m<sup>-3</sup>) (dimensionless)

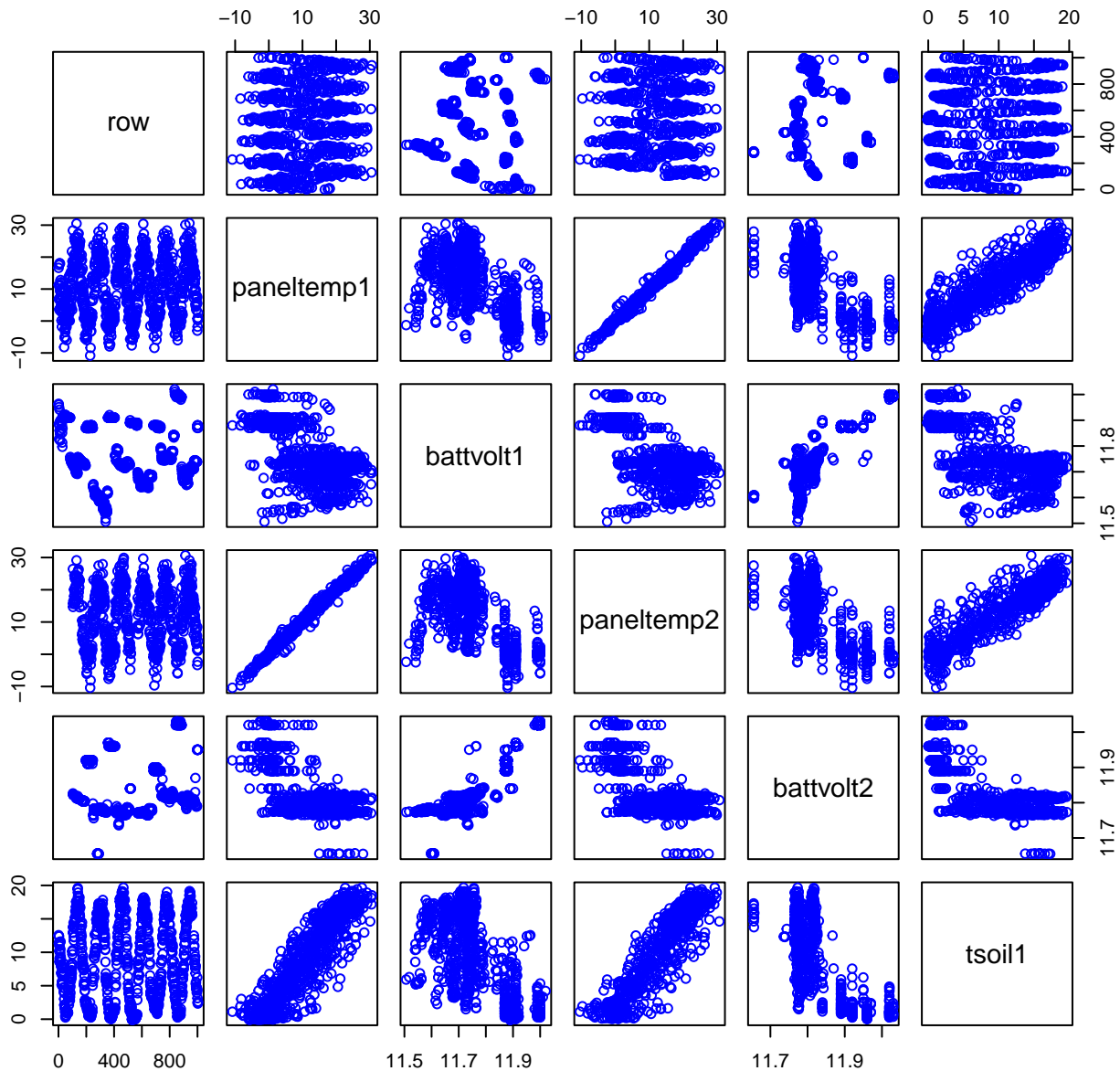
Variable	Min	Median	Mean	Max	NAs
datetime	2015-10-06T16:00			2022-01-01T00:00	0
year	2015.000	2018.000	2018.367	2022.000	0
hour	0.000	12.000	11.501	23.000	0
minute	0.000	0.000	15.000	30.000	0
paneltemp1	-11.180	10.397	10.615	33.751	3306
battvolt1	11.330	11.745	11.773	12.020	3306
paneltemp2	-10.770	12.942	12.035	32.557	25335
battvolt2	10.914	11.810	11.833	12.030	25335
tsoil1	-0.127	7.905	8.466	19.930	4475
tsoil2	-2.324	7.660	8.358	21.828	5074
tsoil3	-1.539	8.933	8.844	21.009	9374
tsoil4	-0.637	8.160	8.522	19.997	8483
tsoil5	-1.022	8.137	8.616	21.294	3317
tsoil6	-0.071	8.572	8.892	20.070	10258
tsoil7	0.672	10.216	9.595	19.994	29336
tsoil8	0.709	9.953	9.540	20.091	27557
tsoil9	0.600	9.943	9.548	20.634	26494
tsoil10	-0.571	9.944	9.666	21.420	26494
tsoil11	0.358	11.023	10.021	20.074	38594
tsoil12	0.626	10.048	9.667	19.350	30736
swc1	0.070	0.201	0.197	0.633	14480
swc2	0.086	0.299	0.289	0.614	14480
swc3	0.183	0.490	0.542	0.910	46402
swc4	0.146	0.431	0.503	0.886	46527
swc5	0.187	0.446	0.494	0.889	47885
swc6	0.214	0.488	0.510	0.889	51355
swc7	0.037	0.154	0.155	0.788	25464
swc8	0.120	0.412	0.392	0.607	25419
swc9	-0.023	0.636	0.655	0.928	67866
swc10	-0.005	0.608	0.650	0.900	67377
swc11	-0.003	0.591	0.628	0.893	68433
swc12	-0.003	0.599	0.637	0.892	67996
tsoil1gf	-0.127	8.054	8.543	19.930	0
tsoil2gf	-2.324	8.027	8.498	21.828	0
tsoil3gf	-1.539	8.124	8.531	21.009	0
tsoil4gf	-0.637	8.100	8.434	19.997	0
tsoil5gf	-1.022	8.186	8.629	21.294	0
tsoil6gf	-0.071	8.101	8.606	20.070	0
tsoil7gf	0.634	8.221	8.729	19.994	4145
tsoil8gf	0.428	8.261	8.757	20.091	4145
tsoil9gf	0.430	8.437	8.788	20.634	4145
tsoil10gf	-0.571	8.157	8.856	21.420	4145
tsoil11gf	-1.591	8.169	8.554	20.074	4145
tsoil12gf	0.626	8.410	8.822	19.350	4145
swc1gf	0.070	0.206	0.202	0.633	4453
swc2gf	0.086	0.301	0.290	0.614	4453
swc3gf	0.183	0.492	0.544	0.910	44543
swc4gf	0.146	0.437	0.507	0.886	44248
swc5gf	0.187	0.449	0.499	0.889	45491

Variable	Min	Median	Mean	Max	NAs
swc6gf	0.214	0.490	0.514	0.889	49485
swc7gf	0.037	0.157	0.159	0.788	4770
swc8gf	0.112	0.420	0.397	0.607	4770
swc9gf	-0.023	0.642	0.663	0.928	63453
swc10gf	-0.005	0.613	0.659	0.900	62867
swc11gf	-0.003	0.600	0.639	0.893	64357
swc12gf	-0.003	0.603	0.647	0.892	63131
swc1gf_corr	0.275	0.429	0.425	0.914	4453
swc2gf_corr	0.257	0.421	0.413	0.661	4453
swc7gf_corr	0.249	0.410	0.413	1.257	4770
swc8gf_corr	0.230	0.428	0.413	0.548	4770

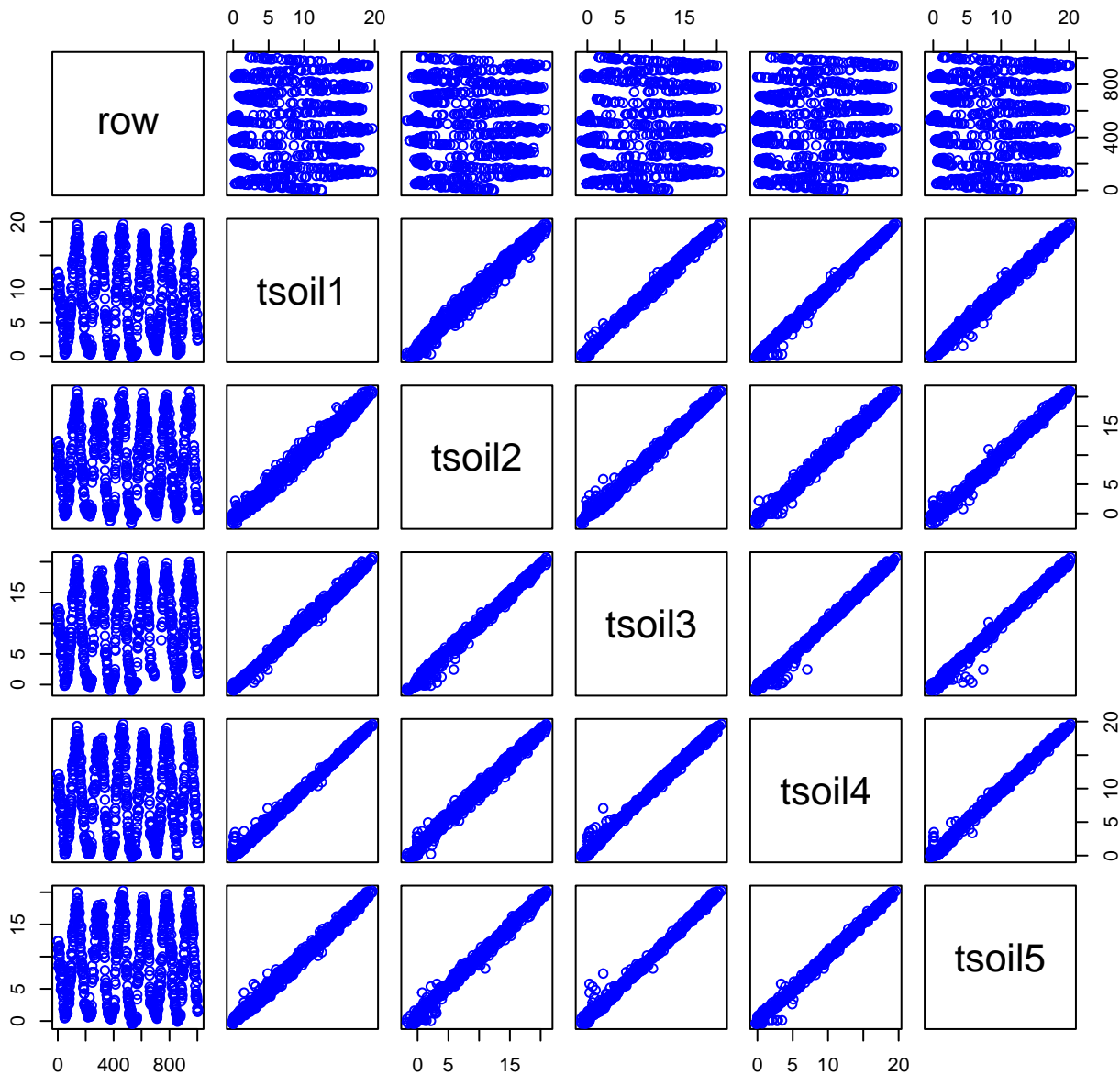
# HF293-03 Plot 1



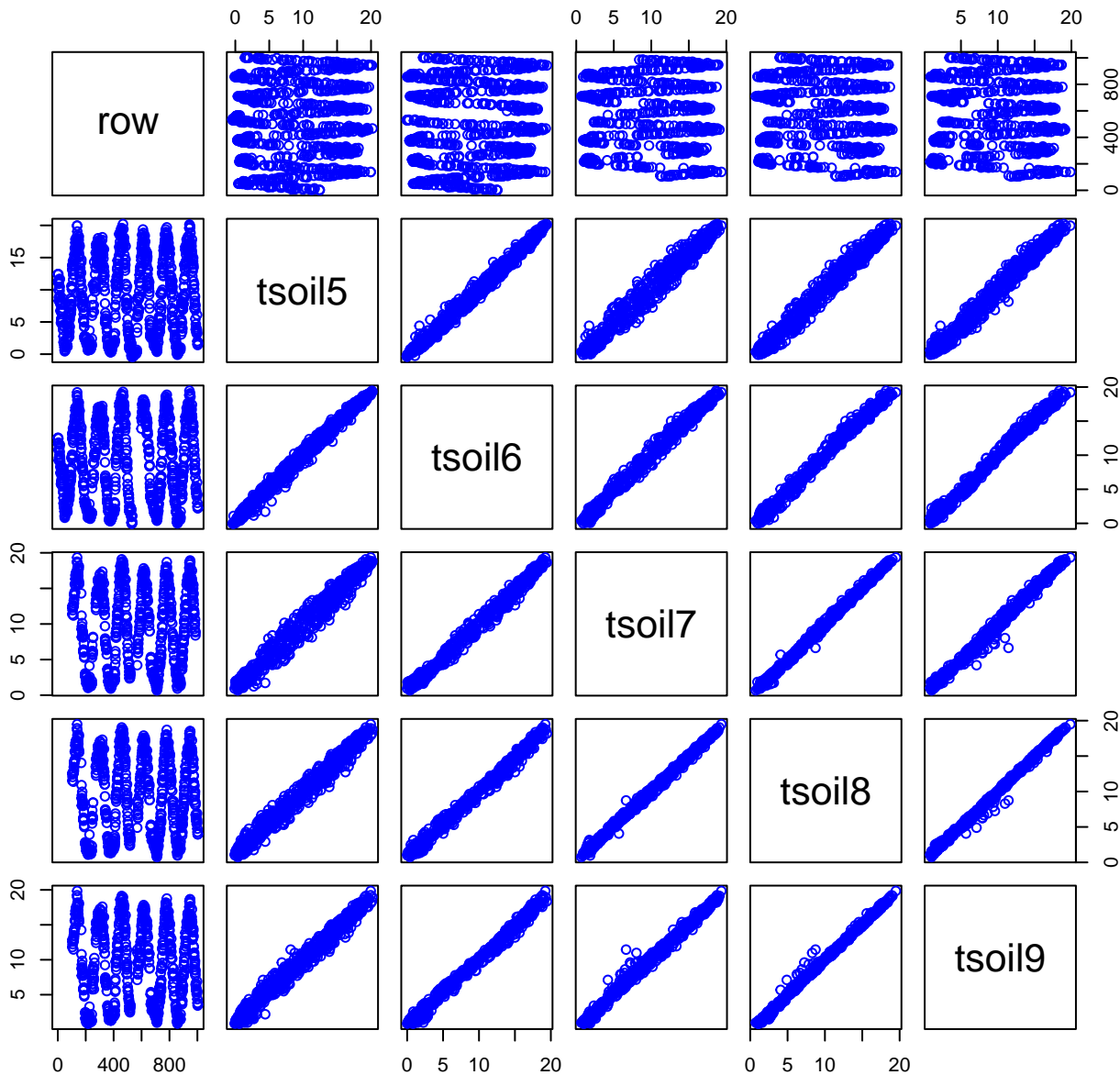
# HF293-03 Plot 2



# HF293-03 Plot 3

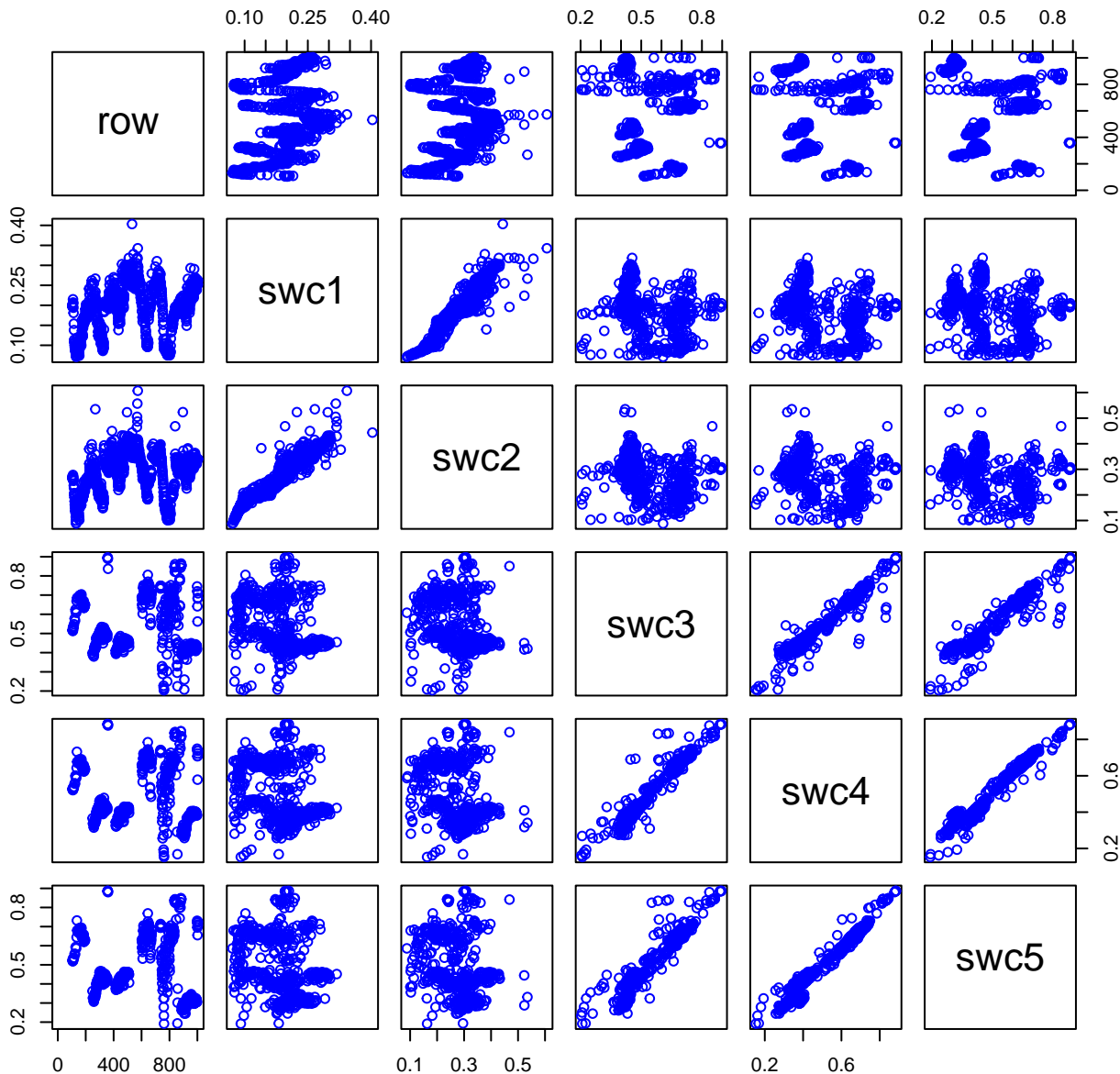


# HF293-03 Plot 4

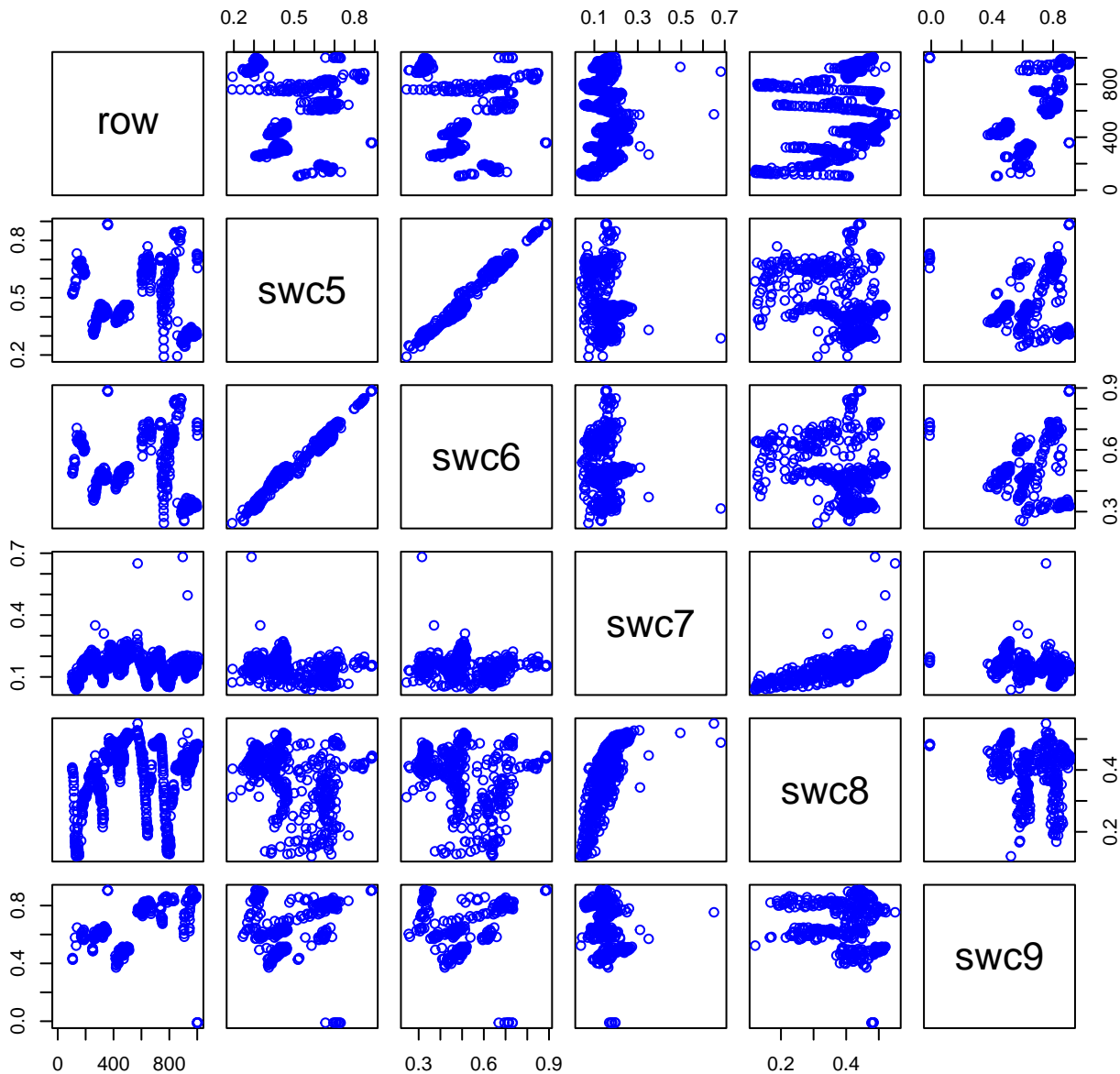




# HF293-03 Plot 6

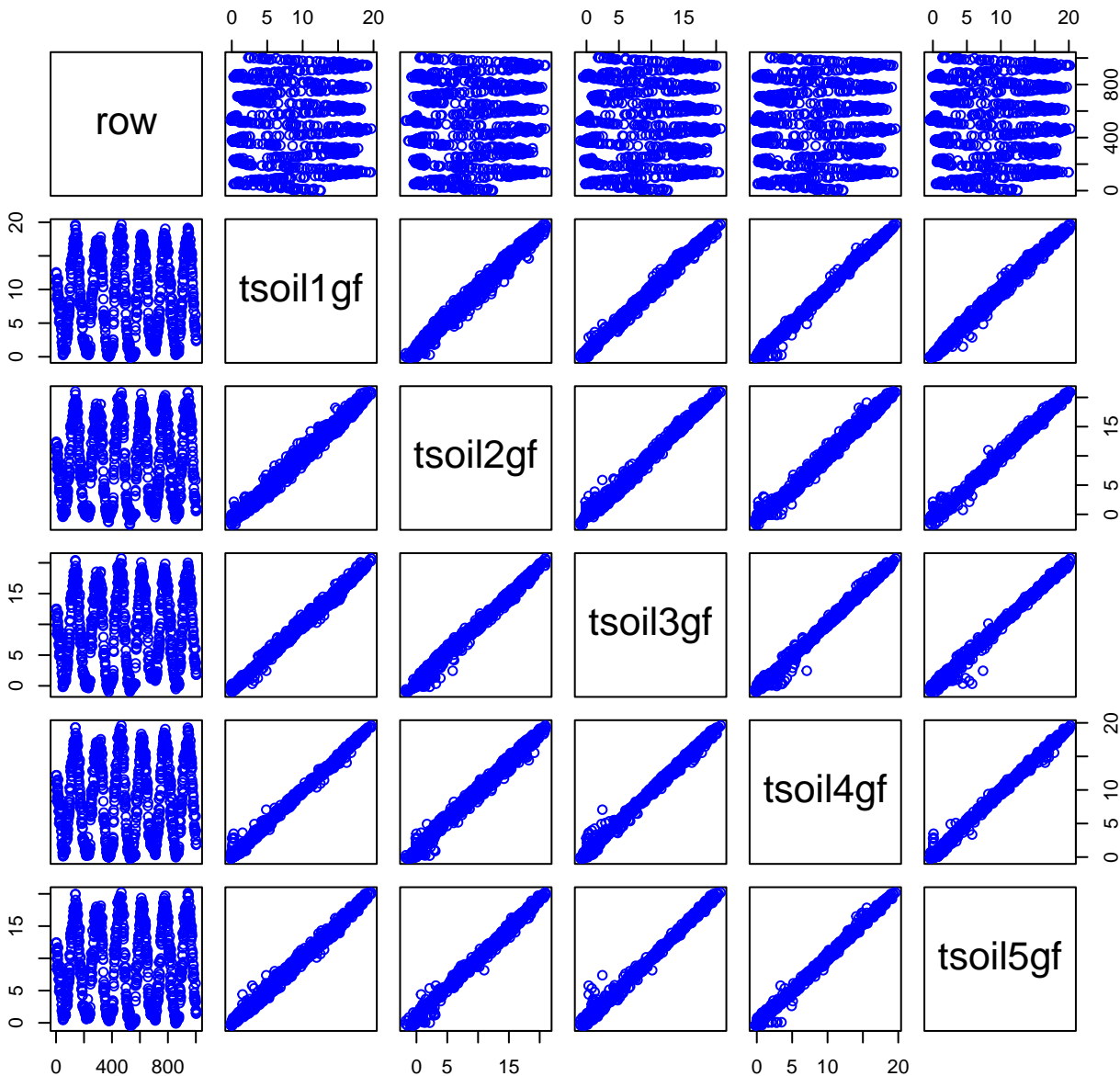


# HF293-03 Plot 7



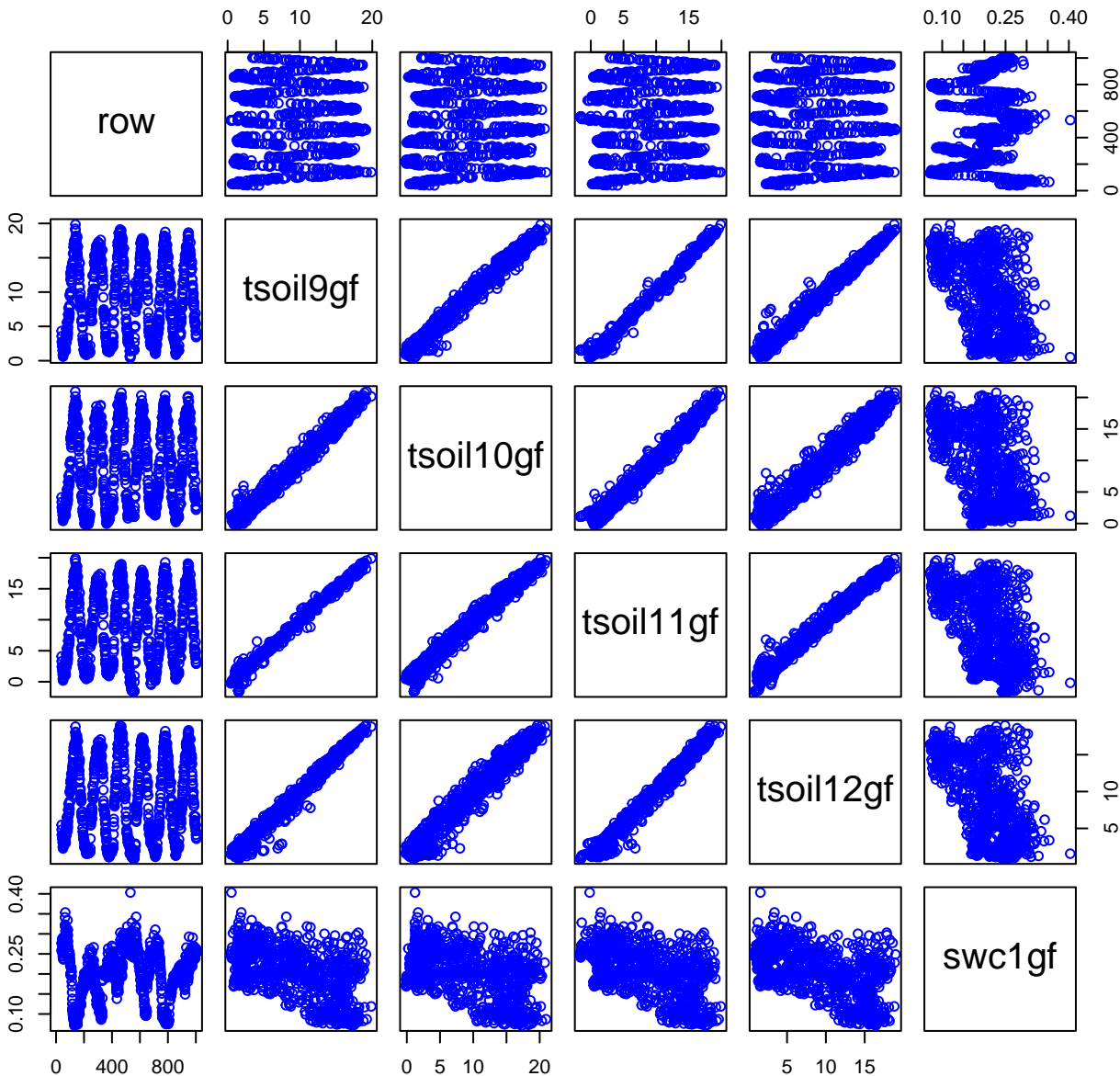


# HF293-03 Plot 9

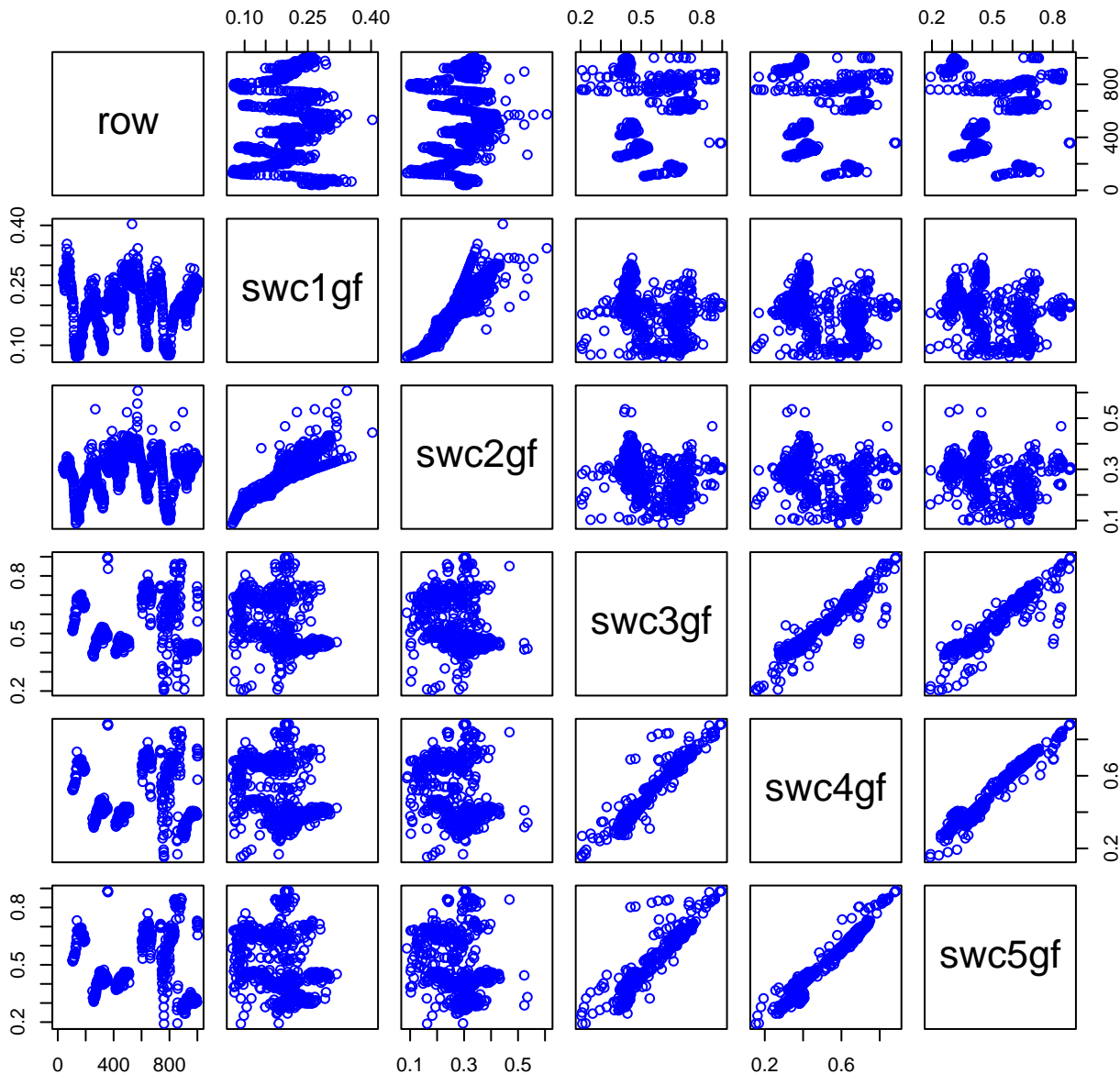




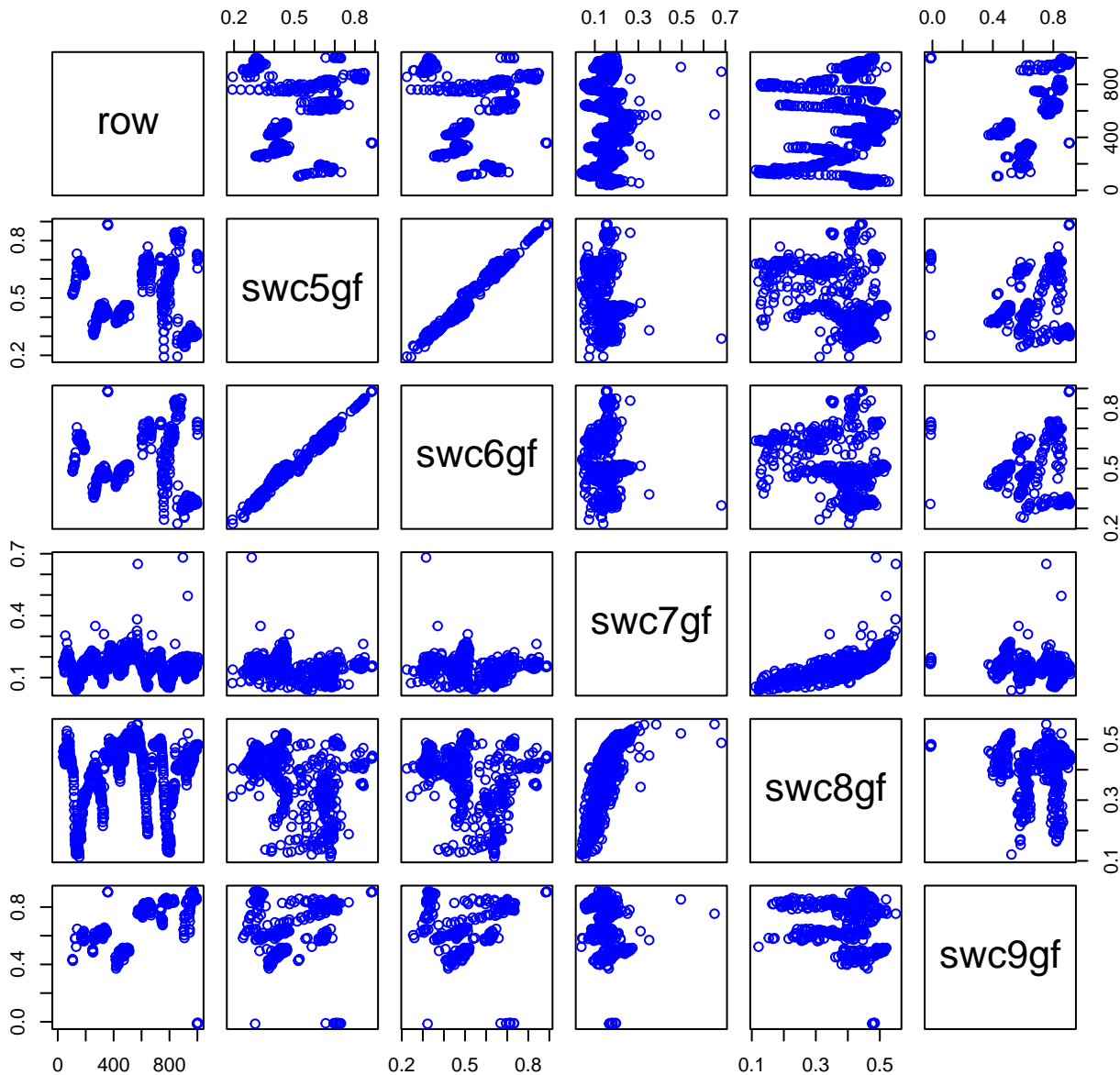
# HF293-03 Plot 11



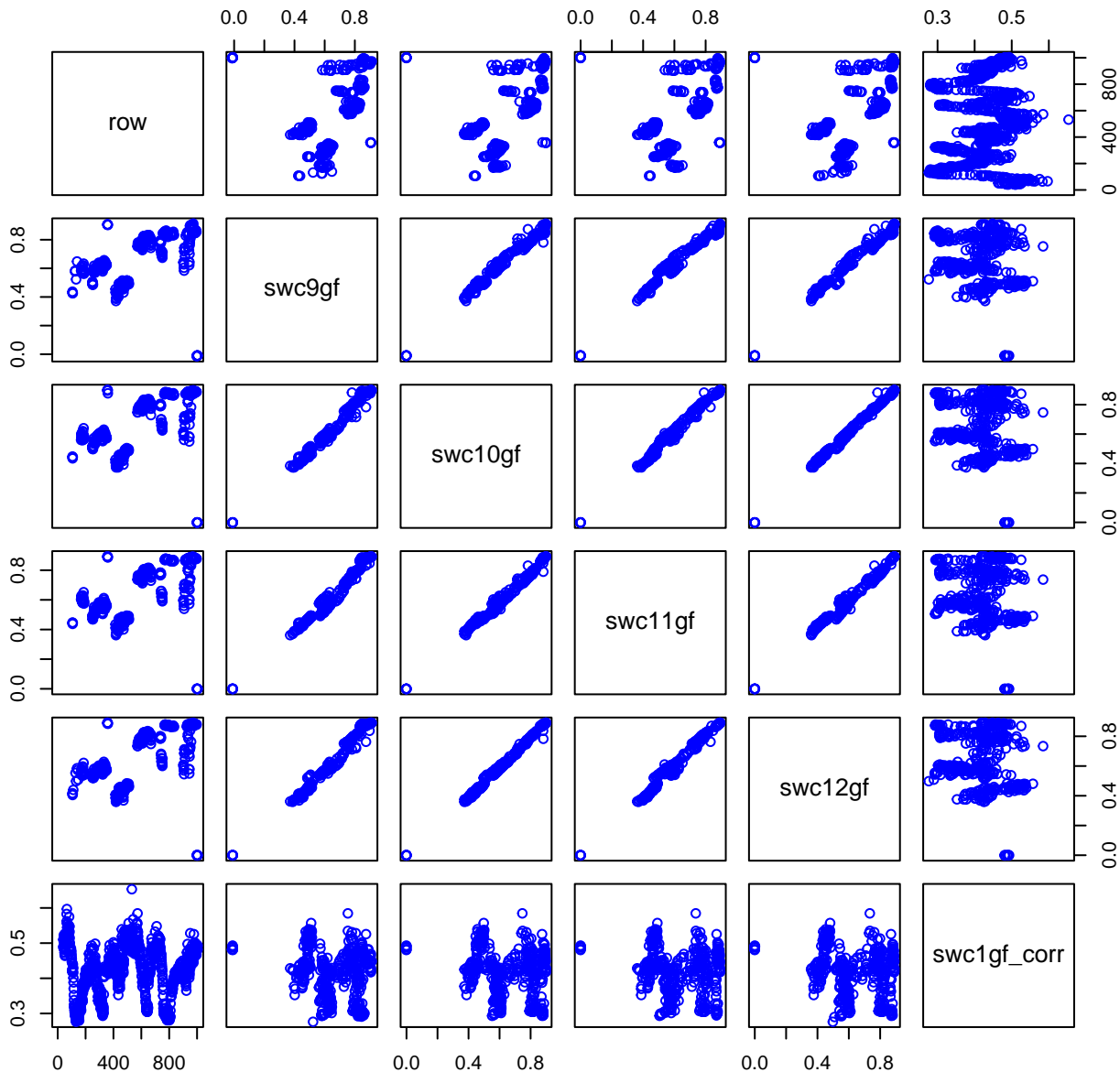
# HF293-03 Plot 12



# HF293-03 Plot 13



# HF293-03 Plot 14



# HF293-03 Plot 15

