ScreenGarden - Shiny app for data analysis Read Me

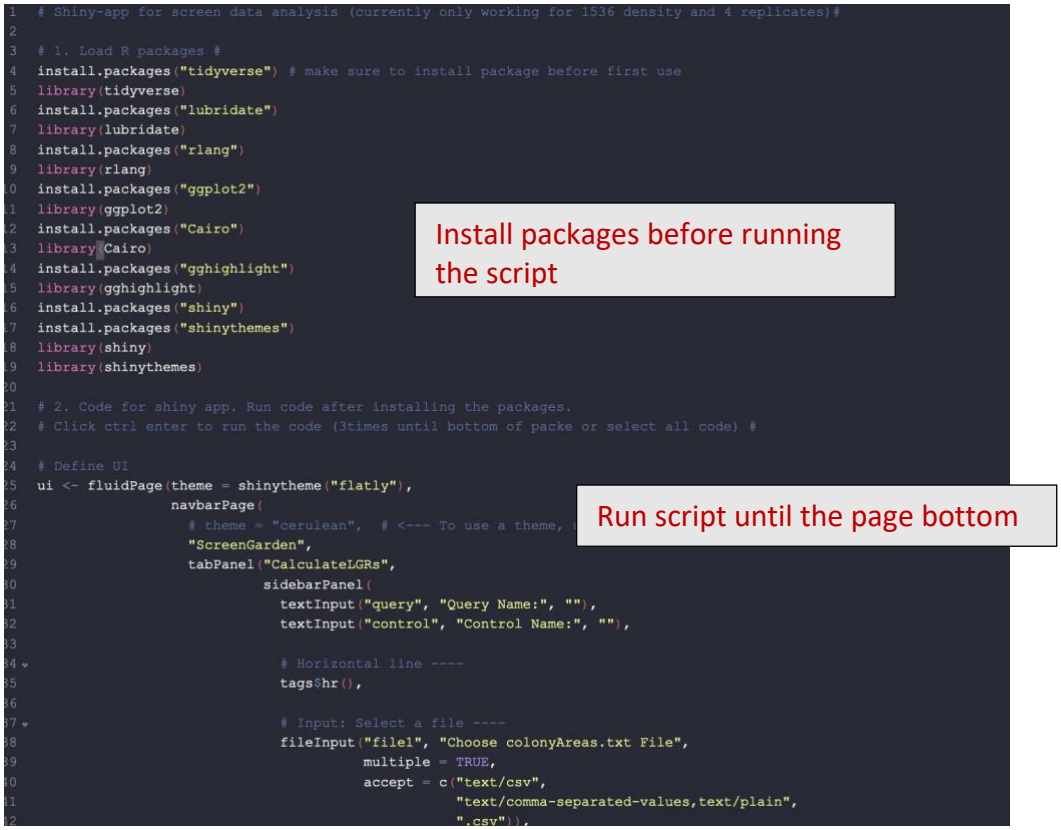
1. You should create a folder containing the files included in the zipped archive, these are:
    a. ScreenGarden_shiny.R
    b. keyfile.txt
    c. colonyAreas.txt

Note: The app works well even if the keyfile.txt and colonyArea.txt are not in the same folder as the code, creating a folder is only recommended to organise the data. Also, both keyfile and colonyAreas.txt can have different names as they are defined by uploading into the app rather than by name.

The keyfile.txt file should be numeric for Plate, Row and Column values at this stage.

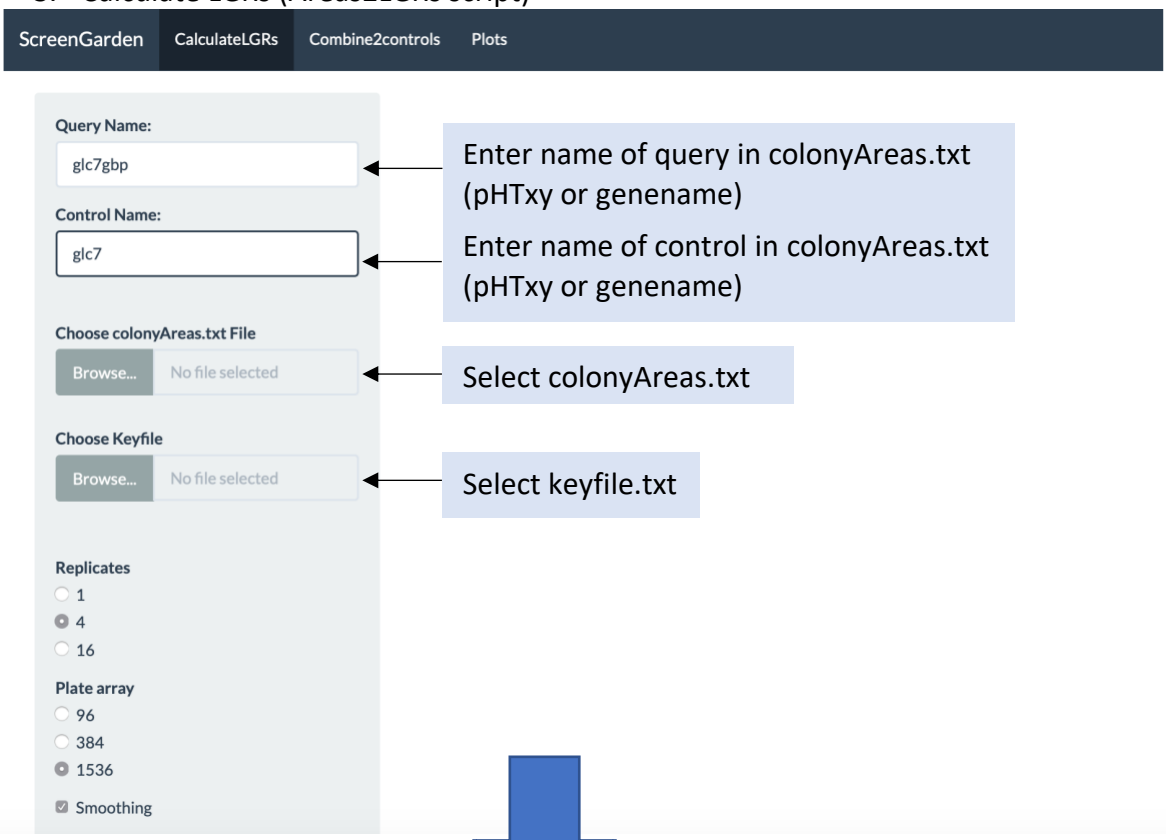
Plate	Row	Column	ORF
1	1	1	YML032C
etc.			

2. Open ScreenGarden_shiny.R in RStudio



After Running the Shiny R script, a 2nd window with the shiny app will appear on the screen:

3. Calculate LGRs (Areas2LGRs script)



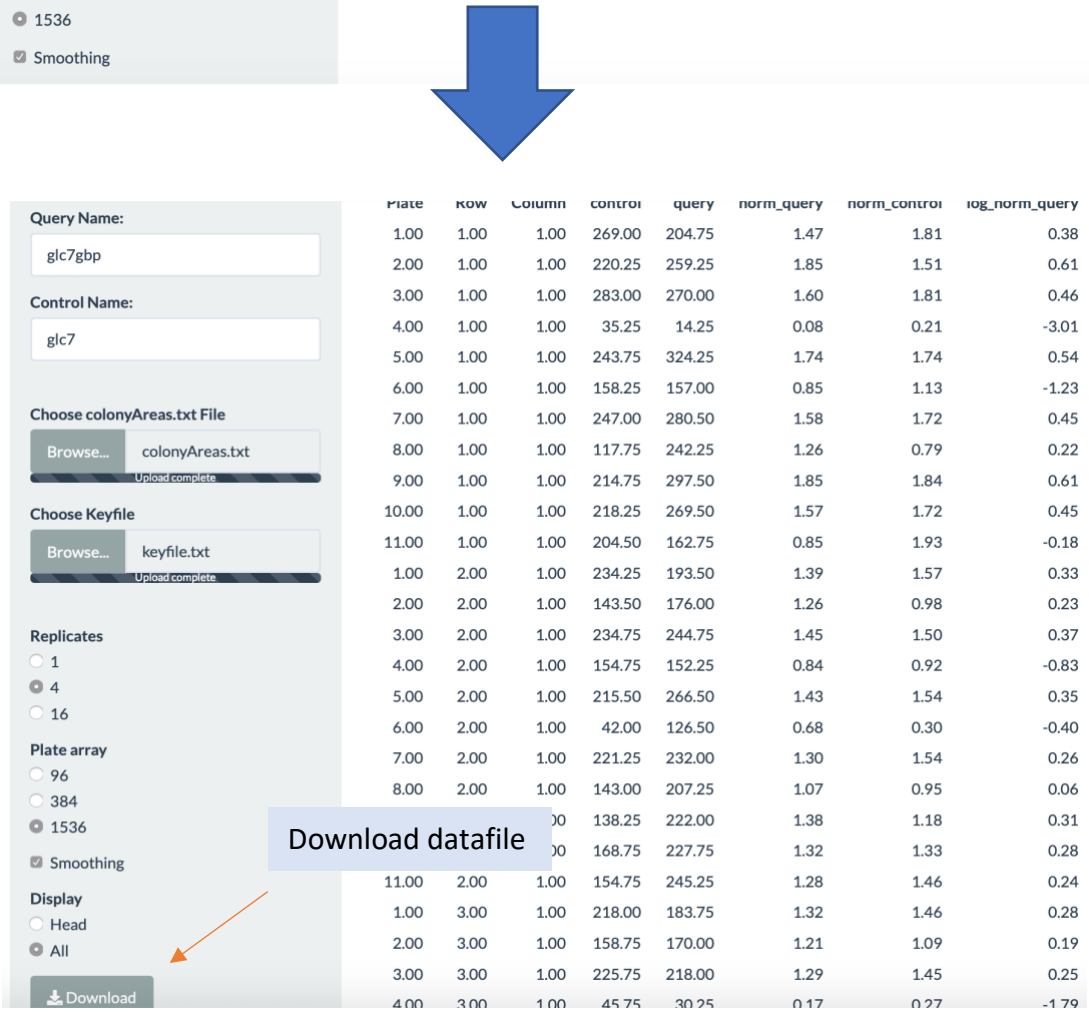
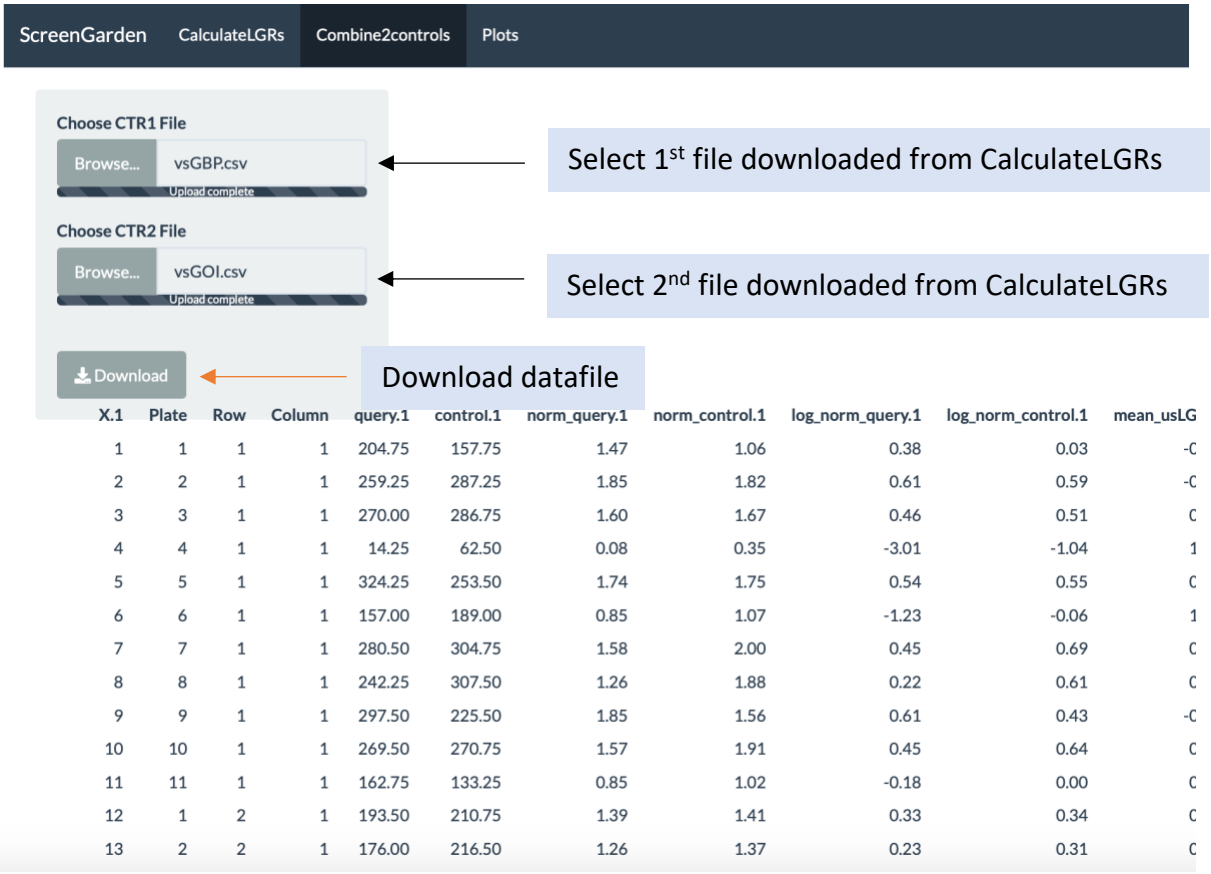


Plate	Row	Column	control	query	norm_query	norm_control	log_norm_query
1.00	1.00	1.00	269.00	204.75	1.47	1.81	0.38
2.00	1.00	1.00	220.25	259.25	1.85	1.51	0.61
3.00	1.00	1.00	283.00	270.00	1.60	1.81	0.46
4.00	1.00	1.00	35.25	14.25	0.08	0.21	-3.01
5.00	1.00	1.00	243.75	324.25	1.74	1.74	0.54
6.00	1.00	1.00	158.25	157.00	0.85	1.13	-1.23
7.00	1.00	1.00	247.00	280.50	1.58	1.72	0.45
8.00	1.00	1.00	117.75	242.25	1.26	0.79	0.22
9.00	1.00	1.00	214.75	297.50	1.85	1.84	0.61
10.00	1.00	1.00	218.25	269.50	1.57	1.72	0.45
11.00	1.00	1.00	204.50	162.75	0.85	1.93	-0.18
1.00	2.00	1.00	234.25	193.50	1.39	1.57	0.33
2.00	2.00	1.00	143.50	176.00	1.26	0.98	0.23
3.00	2.00	1.00	234.75	244.75	1.45	1.50	0.37
4.00	2.00	1.00	154.75	152.25	0.84	0.92	-0.83
5.00	2.00	1.00	215.50	266.50	1.43	1.54	0.35
6.00	2.00	1.00	42.00	126.50	0.68	0.30	-0.40
7.00	2.00	1.00	221.25	232.00	1.30	1.54	0.26
8.00	2.00	1.00	143.00	207.25	1.07	0.95	0.06
			138.25	222.00	1.38	1.18	0.31
			168.75	227.75	1.32	1.33	0.28
11.00	2.00	1.00	154.75	245.25	1.28	1.46	0.24
1.00	3.00	1.00	218.00	183.75	1.32	1.46	0.28
2.00	3.00	1.00	158.75	170.00	1.21	1.09	0.19
3.00	3.00	1.00	225.75	218.00	1.29	1.45	0.25
4.00	3.00	1.00	45.75	30.25	0.17	0.27	-1.79

4. Combine2Controls (CombineSPIdata scipt produces merge file, optional if screens are performed with 2 controls)



X.1	Plate	Row	Column	query.1	control.1	norm_query.1	norm_control.1	log_norm_query.1	log_norm_control.1	mean_usLG
1	1	1	1	204.75	157.75	1.47	1.06	0.38	0.03	-0
2	2	1	1	259.25	287.25	1.85	1.82	0.61	0.59	-0
3	3	1	1	270.00	286.75	1.60	1.67	0.46	0.51	0
4	4	1	1	14.25	62.50	0.08	0.35	-3.01	-1.04	1
5	5	1	1	324.25	253.50	1.74	1.75	0.54	0.55	0
6	6	1	1	157.00	189.00	0.85	1.07	-1.23	-0.06	1
7	7	1	1	280.50	304.75	1.58	2.00	0.45	0.69	0
8	8	1	1	242.25	307.50	1.26	1.88	0.22	0.61	0
9	9	1	1	297.50	225.50	1.85	1.56	0.61	0.43	-0
10	10	1	1	269.50	270.75	1.57	1.91	0.45	0.64	0
11	11	1	1	162.75	133.25	0.85	1.02	-0.18	0.00	0
12	1	2	1	193.50	210.75	1.39	1.41	0.33	0.34	0
13	2	2	1	176.00	216.50	1.26	1.37	0.23	0.31	0

5. Plotting data: note that output files from both scripts (CalculateLGRs and Combine2controls) can be plotted. Plotting works independently from the other scripts, thus any dataset which contains a column called “Mean_LGR” can be plotted