S4Table: List of metabolites and its loading score for PC1 and PC2 of three stages viz. cotyledon, callus and regenerated shoot for WT, *shr* and *pct1-2* in combined, used for making collective PCA graph (Fig.2) Values were obtained using statistical analysis software (MS-DIAL) (37).

S.No.	Metabolites	PC1	PC2
1.	Erythritol	-0.021988812	0.00394531
2.	Ribose	0.003597147	-0.001715208
3.	L-Glycerol-2-phosphate	0.000455114	0.000137687
4.	D-Psicopyranose	0.018844629	0.006137419
5.	Talofuranose	0.003508932	-0.00197034
6.	Tagatose{BP}	0.430961073	-0.258332334
7.	Sorbose	-0.000120666	0.061661532
8.	Psicose	0.237257613	-0.098309687
9.	Fructose	0.345304637	-0.160505075
10.	Talopyranose	0.091040044	-0.060884831
11.	D-Glucose (Z)	0.174007959	-0.085841356
12.	Galactose	0.037926129	-0.040814792
13.	Talose	0.015370875	-0.015524453
14.	Glucose	0.082584177	-0.084870323
15.	1-Methyl-α-D-glucopyranoside	0.061206307	-0.211619126
16.	β-D-Glucopyranose	0.120735058	-0.087469131
17.	Galactonate	0.004872665	-0.002439285
18.	myo-Inositol	0.10533264	-0.019407242
19.	D-Glucopyranose	0.23770279	0.360770202
20.	1-Methyl-β-D-galactopyranoside	0.001393003	0.007823691
21.	Galactosylglycerol	0.00214206	-0.001246753
22.	Glucose-6-phosphate	0.000896591	-0.001920598
23.	myo-Inositol-2-P	0.001104671	1.71387E-06
24.	Maltitol	0.000381989	-0.000284108
25.	1,2,3-Butantriol	0.001678692	-0.000549977
26.	Cellobiose(isomer 1)	-6.36838E-05	0.000203459
27.	Sucrose	0.174563216	-0.024248043
28.	Turanose (isomer 1)	0.036478455	-0.128134589
29.	Cellobiose (isomer 2)	0.001027342	-0.00377468
30.	Turanose (isomer 2)	0.001393747	-0.004885578
31.	Trehalose	0.001796729	-0.000592215
32.	α-D-Galactopyranosyl α-(1,4)-D-galactopyranoside	0.0030355	-0.001785158
33.	Lactose	0.001814773	0.000378934
34.	Isomaltose	0.000827571	-0.000374746
35.	Valine	0.02010162	0.000822121
36.	Alanine	0.030120455	-0.015572015
37.	Serine	0.011564951	0.004854238
38.	Threonine	0.007702392	0.002126332
39.	Isoleucine	0.009568701	-0.000635509
40.	Proline	0.011370694	0.005809423

41.	Glycine	0.005172447	-0.006049497
42.	Aspartate	0.006075547	-0.006567806
43.	Threonate	0.003779486	0.00308947
44.	Glutamate	0.008420334	0.004244251
45.	Phenylalanine	0.002519787	0.000367693
46.	Asparagine	0.077747807	0.068427955
47.	Glutamine	0.298215401	0.219225938
48.	Lysine	0.007744907	0.001517897
49.	Allantoin	0.001266105	0.002075365
50.	Pentonate	0.00141235	-0.000462917
51.	Lyxonate	0.001997474	1.99032E-05
52.	Gluconate	0.004355779	0.000132681
53.	Palimitate	0.018559915	0.004695722
54.	Glucarate	0.00499326	0.004827302
55.	Galactarate	0.002959364	-0.006567306
56.	Linoleate	0.000817666	-9.5354E-05
57.	Stearate	0.029125828	0.004159578
58.	Sinapinate	-0.000385502	0.000996568
59.	Caffeoylquinate	0.004215301	0.007055412
60.	Ethanolamine	0.016356099	-0.005372545
61.	Ethanolamine P	0.001154536	0.000857501
62.	Dopamine	0.005461726	0.007948295
63.	Normetadrenaline	0.002380351	-0.00362003
64.	Noradrenaline	0.003405748	0.002647377
65.	5-Hydroxytryptamine	0.000893204	0.001804563
66.	Pyridine, 2-hydroxy	0.001825056	-0.000228644
67.	Uridine	0.000290878	-0.000474817
68.	Adenosine	0.000607212	-0.000545296
69.	Borate	0.018098254	-0.008671463
70.	Pyruvate isomer 1	0.000529748	0.000286592
71.	1,3-Propanediol	0.011211544	-0.010423863
72.	Lactate	0.017572216	-0.069266416
73.	Glycolate	0.001127669	-0.000574924
74.	Pyruvate isomer 2	0.000764467	-0.000337921
75.	Oxalate	0.002615083	0.000168587
76.	(R)-3-Hydroxybutyric acid	0.000807576	-0.005618908
77.	Phosphorate	0.037456897	-0.007130139
78.	Succinate	0.005281934	-0.005160543
79.	Glycerate	0.001016945	-0.001025498
80.	3-Methyl-2-ketopiperazine	-0.013529207	0.002653532
81.	Pipecolate	-0.028350719	0.005560714
82.	Malate, 2-methyl-	0.000243341	0.00029703
83.	Malate	0.084281614	-0.362179665
84.	5-Oxoproline	0.552913152	0.462211353
85.	GABA	0.239742253	-0.517908412
86.	Erythronate	0.000418662	0.000710661
87.	2-Imidazolidone-4-carboxylic acid	0.002074663	0.000768955

88.	Pentanedioic acid	0.001059286	7.44259E-05
89.	Citrate	0.031455923	-0.045284934
90.	Quinate	0.006819638	0.006567098
91.	Caffeate	-0.002687469	0.000479218