

Table S1. Quality statistics of filtered reads

Sample ID	Clean reads (Mb)	Clean Base (Gb)	GC (%)	Q20 (%)	Q30 (%)
N0(CK)	24.57	7.37	42.86	98.26	94.58
N1	28.33	8.50	42.53	98.27	94.60
N2	22.51	6.75	43.07	98.31	94.73
N3	25.19	7.56	43.40	98.34	94.79

Table S2. Tatistical data of reads mapping

Sample ID	Total clean reads	Reads mapped ratio	Multi mapped ratio	Uniq mapped ratio	Reads plus ratio	Reads minus ratio
N0(CK)	49,130,516	69.05%	0.35%	99.65%	64.94%	35.06%
N1	56,664,610	66.48%	0.39%	99.61%	66.08%	33.92%
N2	45,007,535	67.87%	0.36%	99.64%	65.51%	34.49%
N3	50,386,843	70.02%	0.32%	99.68%	64.46%	35.54%

Table S3. Different genes related to anthocyanidin synthesis pathways in purple potato tubers with different nitrogen levels

Gene annotation	ReSeq ID
LAR	PGSC0003DMG400020471
DFR	PGSC0003DMG400003605
AT	PGSC0003DMG400029263
CHS	PGSC0003DMG400029620
UFGT	PGSC0003DMG400031454
	PGSC0003DMG400029130
	PGSC0003DMG400033567
F3H	PGSC0003DMG400007232
	PGSC0003DMG400010666

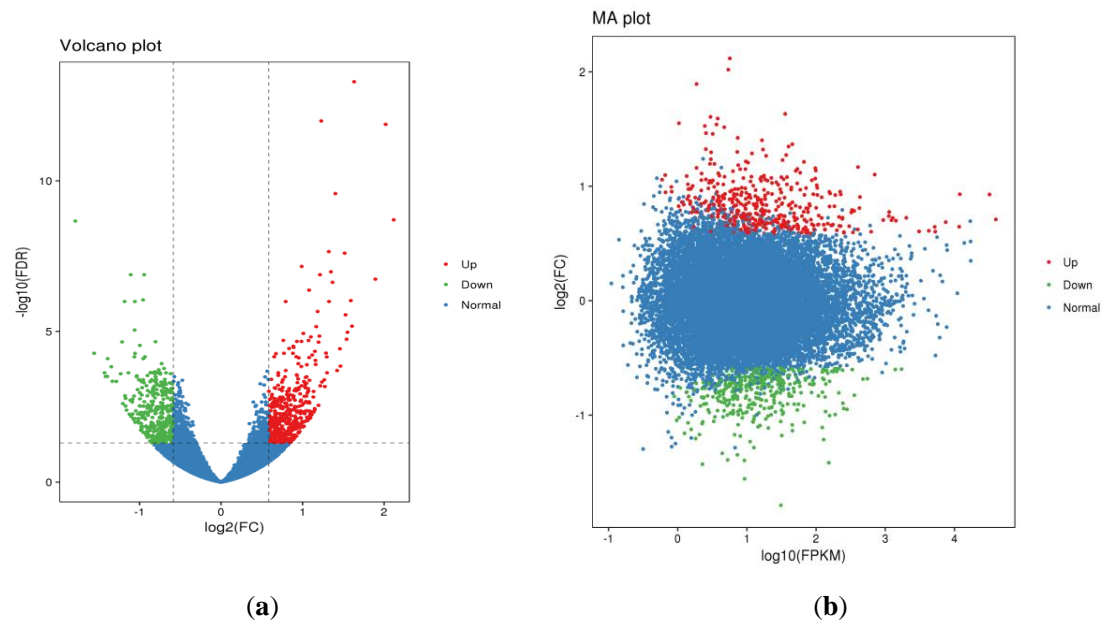


Figure S1. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N0 VS N1 treatments.

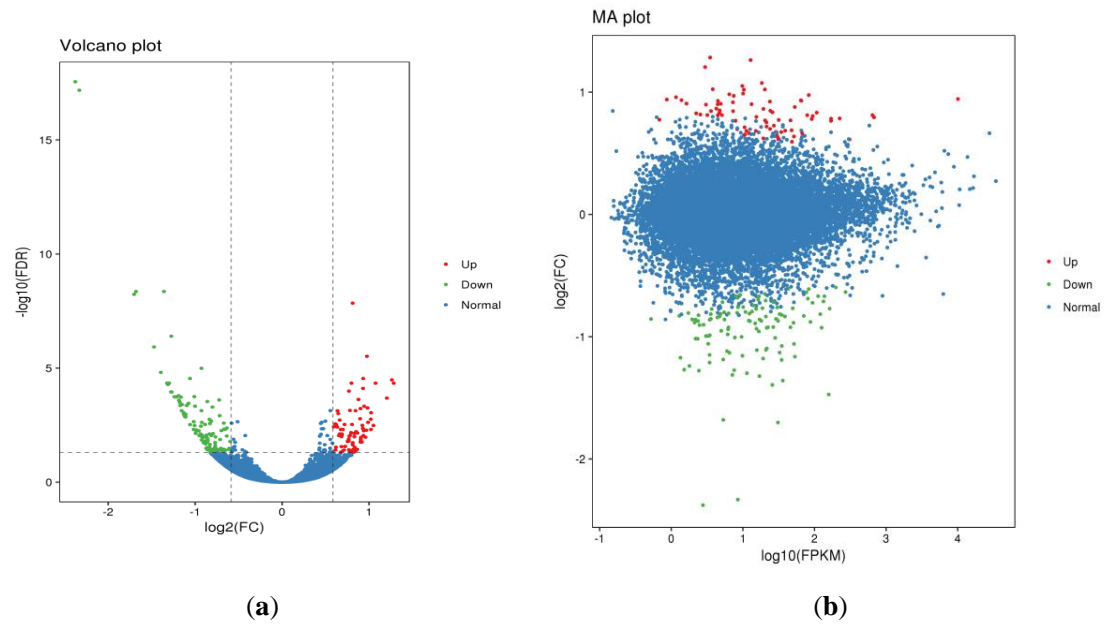


Figure S2. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N0 VS N2 treatments.

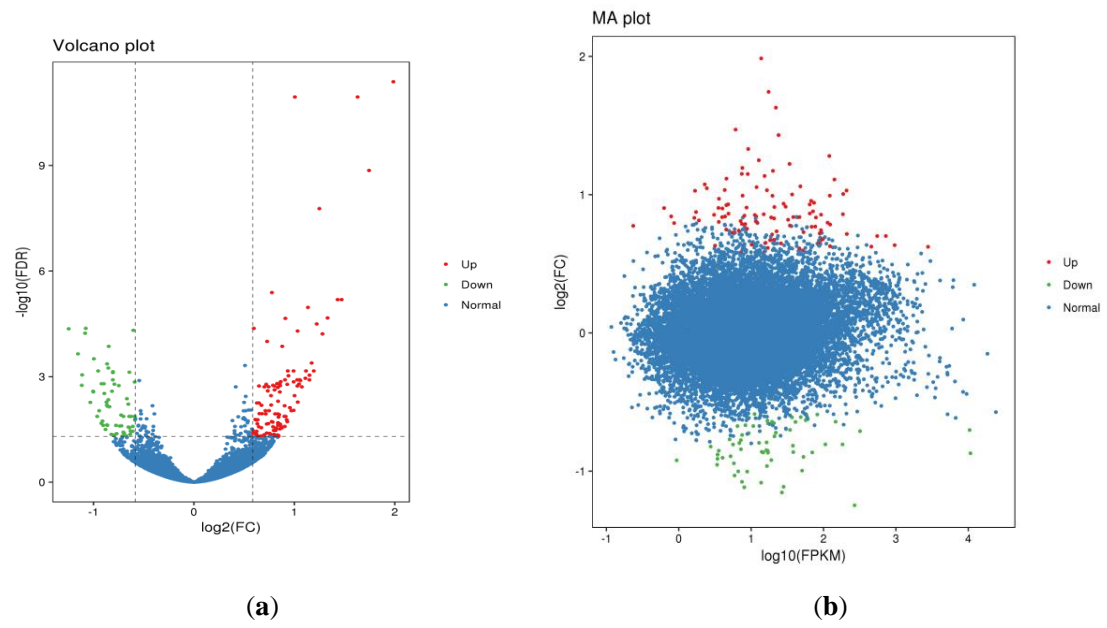


Figure S3. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N0 VS N3 treatments.

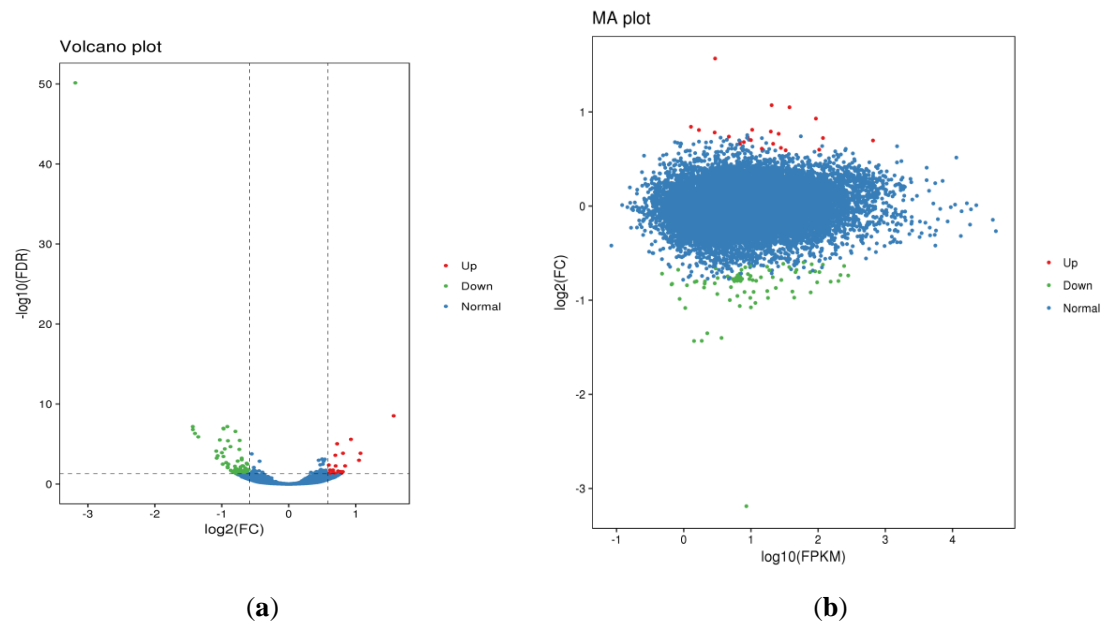


Figure S4. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N1 VS N2 treatments.

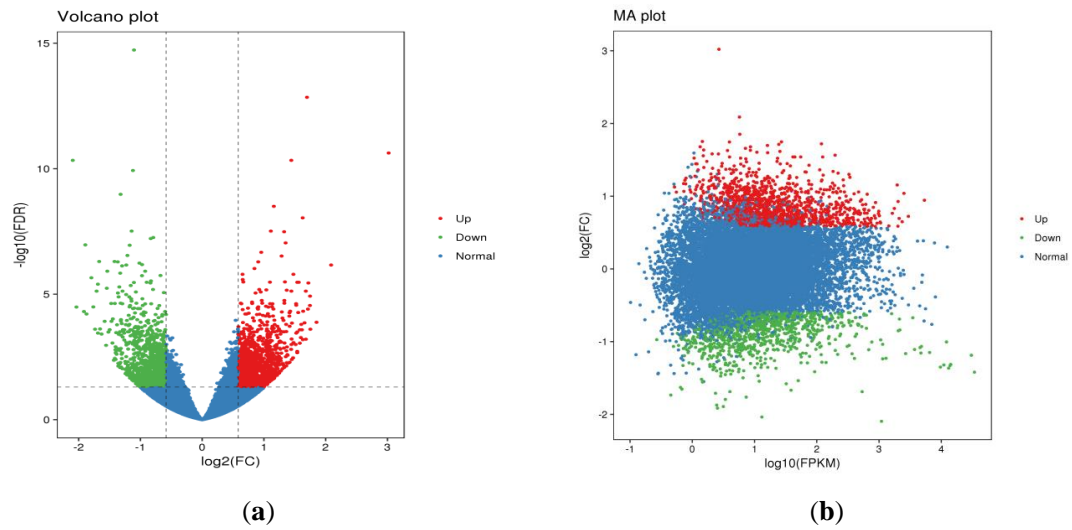


Figure S5. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N1 VS N3 treatments.

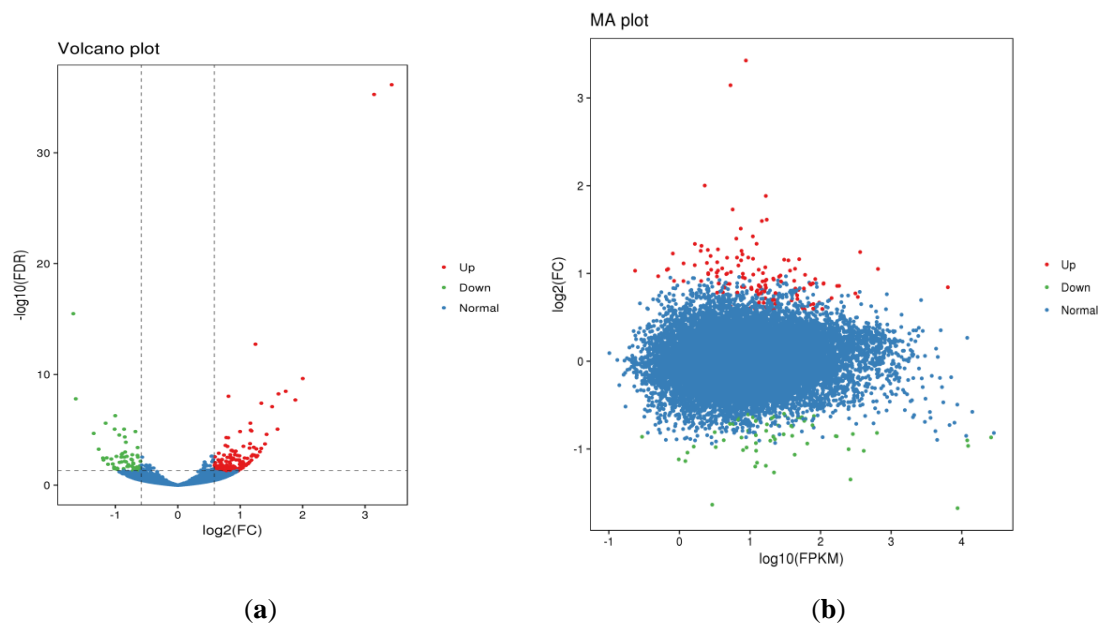


Figure S6. Volcano plots (a) and MA plot (b) of the DEGs upregulated and downregulated between N2 VS N3 treatments.

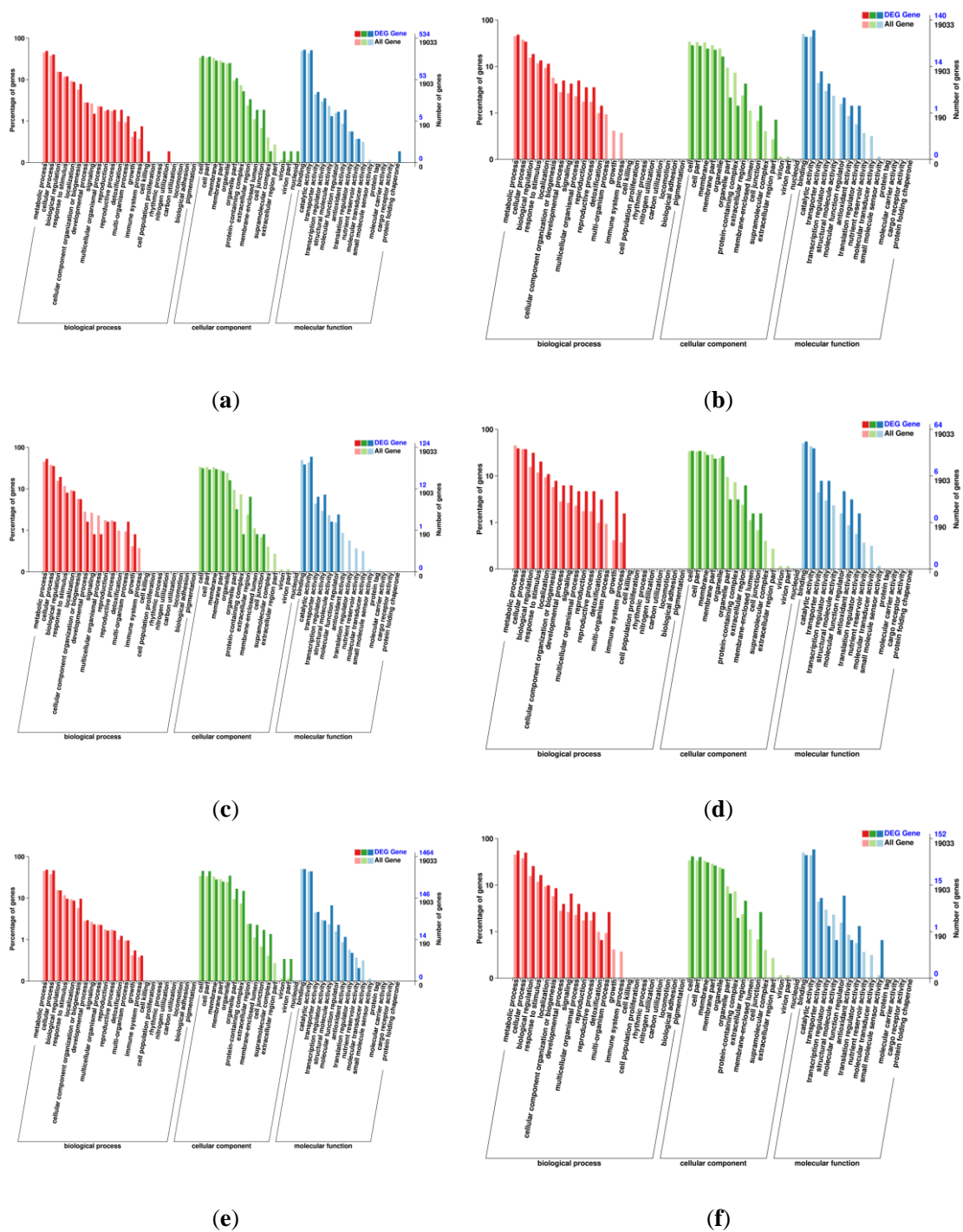


Figure S7. GO annotation of the DEGs. (a) GO annotation of the DEGs of N0 and N1. (b) GO annotation of the DEGs of N0 and N2. (c) GO annotation of the DEGs of N0 and N3. (d) GO annotation of the DEGs of N1 and N2. (e) GO annotation of the DEGs of N1 and N3. (f) GO annotation of the DEGs of N2 and N3

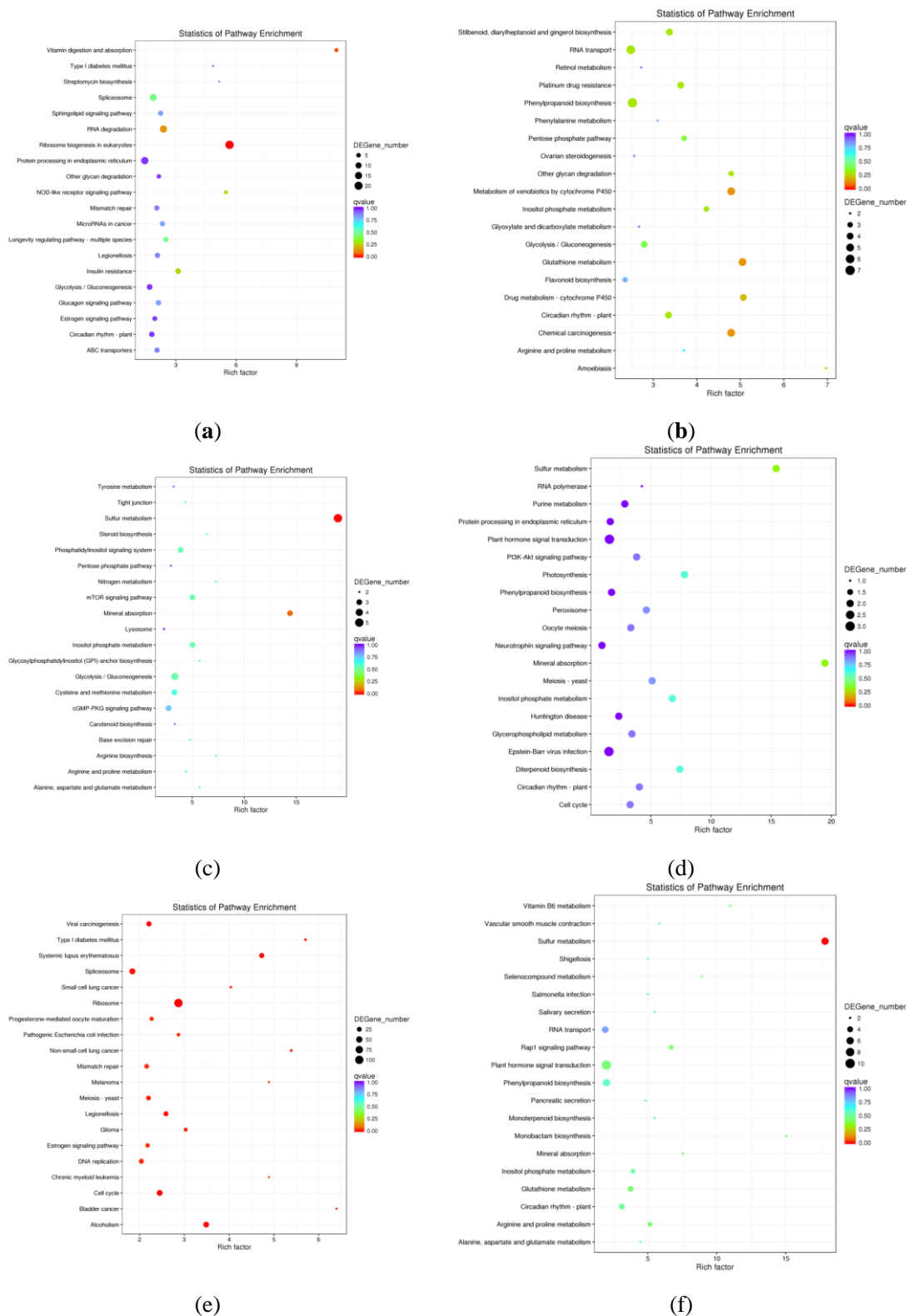


Figure S8. KEGG enrichment analysis of the DEGs. (a) KEGG enrichment analysis of the DEGs of N0 and N1. (b) KEGG enrichment analysis of the DEGs of N0 and N2. (c) KEGG enrichment analysis of the DEGs of N0 and N3. (d) KEGG enrichment analysis of the DEGs of N1 and N2. (e) KEGG enrichment analysis of the DEGs of N1 and N3. (f) KEGG enrichment analysis of the DEGs of N2 and N3.