



SI-Figure 1. Comparison of differentially expressed proteins (TMT ratio) of NB/SB (A) and MB/SB (B) between two biological replicates.

SI-Table 1. Primers of main differentially expressed root protein from millet and peanut for qPCR

Primers of crops	From 5' to 3'
Primers of millet root	
Urease (K3XV94)	F-CTGATACTGCCAGGACAAT R-CACCTCAACAGAACCAACG
Protein disulfide-isomer (K3YR67)	F-CCACCATCCTCTTCTTCA R-TCAGCACCAGATAGCGAGT
Asparagine synthetase (K4A7H9)	F-AATCAGTTCGCAAGTCC R-CAGATGTGGGCCAATGTA
5-methyltetrahydropteroyltriglutamate-homocysteine methyltransferase 1 (K4A622)	F-AGGAGGAATACATCAGTGCC R-ACAGCGTGACCCATAAGA
Fatty acid amide hydrolase (K3Y5Y8)	F-GATTCCACCAGGAGATTTG R-GGATTGTTCCAGTTACCC
Inorganic phosphate transporter 1-4 (K4A853)	F-TCTGCTTCTCCGCTTCT R-ACCTCGGGTCTTCTGTT
Primers of peanut root	
Acid phosphatase (O49855)	F-TTGATCTTGGAACCGCACCT R-TCTTTGGGACTGTGGCCTTC
Annexin (A0A0F6VX63)	F-CTGCCTTTGGTTAGTTCG R-CTGCCTTTGGTTAGTTCG
Histone H2A (C6TMV8)	F-GCTGTGAGGAACGATGAA R-TTGTGCCCTTAGATGGAG
Lipoxygenase (Q4JME7)	F-GATTCTGCTTTCACCAAC R-GATTCAATGATACCCTCTGC

SI-Table 2. Differentially expressed proteins of millet root in the complete, partial and no root interactions identified by tandem mass tag (TMT) technique

Accession No.	Protein description	Taxonomy	Molecular weight (kDa)	Matched peptides	Accumulated	
					NB/SB	MB/SB
C metabolic						
K3XVC0	Uncharacterized protein	<i>Setaria italica</i>	92.7	5	0.631	0.732
K4A9X4	Uncharacterized protein	<i>Setaria italica</i>	49.9	3	0.429	0.520
K3XRL7	Uncharacterized protein (Fragment)	<i>Setaria italica</i>	37.5	3	1.517	1.354
K3Y6N3	Uncharacterized protein	<i>Setaria italica</i>	56.5	2	2.156	2.014
K3Y7G3	Aldose 1-epimerase	<i>Setaria italica</i>	46.2	2	1.566	1.575
K3Z7U4	Uncharacterized protein	<i>Setaria italica</i>	35.0	3	2.621	1.863
K4AE68	Chitinase	<i>Setaria italica</i>	26.3	2	0.566	1.014
K3XL01	Uncharacterized protein	<i>Setaria italica</i>	27.5	2	1.445	1.695
K4A5X5	Uncharacterized protein	<i>Setaria italica</i>	92.9	5	0.584	0.808
K3YR67	Protein disulfide-isomerase	<i>Setaria italica</i>	63.0	3	0.617	0.854
K3YPQ0	Uncharacterized protein	<i>Setaria italica</i>	101.0	7	0.656	0.934
K3YAA0	Uncharacterized protein	<i>Setaria italica</i>	20.0	2	1.912	1.931
K3XYV6	Uncharacterized protein	<i>Setaria italica</i>	27.3	3	1.368	1.607
K4AM22	Uncharacterized protein	<i>Setaria italica</i>	15.7	4	1.665	0.999
U5TXE2	Photosystem I iron-sulfur center	<i>Setaria italica</i>	8.9	3	1.280	1.505
K3XJV1	Uncharacterized protein	<i>Setaria italica</i>	35.0	6	1.454	1.628
N metabolic						
K3YHT3	Uncharacterized protein	<i>Setaria italica</i>	46.3	3	1.521	1.365
K3XEN9	Uncharacterized protein	<i>Setaria italica</i>	87.2	2	1.789	2.054
K3Y5Y8	Fatty acid amide hydrolase	<i>Setaria italica</i>	66.9	4	1.505	1.389
K3XV94	Urease	<i>Setaria italica</i>	90.4	3	1.349	1.518

K3Y8G3	Uncharacterized protein	<i>Setaria italica</i>	37.4	2	0.858	0.599
K3ZQ32	Uncharacterized protein	<i>Setaria italica</i>	139.0	2	1.503	1.186
K4A7H9	Asparagine synthetase	<i>Setaria italica</i>	66.0	2	1.901	0.845
K4A839	Folylpolyglutamate synthase	<i>Setaria italica</i>	59.7	2	0.591	0.712
K4A622	5-methyltetrahydropteroyltriglutamate--homocysteine methyltransferase 1	<i>Setaria italica</i>	86.4	9	0.600	0.848
K3Y9L3	Uncharacterized protein	<i>Setaria italica</i>	27.0	2	1.373	1.571
K3YDF0	Cysteine synthase	<i>Setaria italica</i>	36.4	2	2.225	1.575
K4AEM5	Uncharacterized protein	<i>Setaria italica</i>	24.4	2	1.543	1.736
K4A7H9	Asparagine synthetase	<i>Setaria italica</i>	66.0	2	1.901	0.845
K3YDF0	Cysteine synthase	<i>Setaria italica</i>	36.4	2	2.225	1.575
K3YKY0	Uncharacterized protein (Fragment)	<i>Setaria italica</i>	43.5	14	0.568	0.772
Protein metabolic						
K3Z4Y0	Uncharacterized protein	<i>Setaria italica</i>	60.1	2	1.757	1.492
K3YGH9	Uncharacterized protein	<i>Setaria italica</i>	80.2	17	0.615	0.794
K3XVI0	Uncharacterized protein	<i>Setaria italica</i>	80.2	3	1.536	1.390
K3XXJ0	Uncharacterized protein	<i>Setaria italica</i>	41.3	2	0.507	0.590
K4A9U8	Uncharacterized protein	<i>Setaria italica</i>	49.7	3	0.415	0.441
K3YP87	Uncharacterized protein	<i>Setaria italica</i>	183.4	1	0.951	1.516
K3Y9L3	Uncharacterized protein	<i>Setaria italica</i>	27.0	2	1.373	1.571
K3Z2V7	Photosystem II CP47 reaction center protein	<i>Setaria italica</i>	53.0	2	1.546	1.566
K4ADW9	Uncharacterized protein	<i>Setaria italica</i>	28.3	2	1.280	1.670
K3YEZ6	Uncharacterized protein	<i>Setaria italica</i>	11.8	2	1.621	1.470
Transport						
K4A853	Inorganic phosphate transporter 1-4	<i>Setaria italica</i>	58.8	3	1.636	1.175

K3YRM4	ABC transporter	<i>Setaria italica</i>	56.2	2	0.961	1.795
K4AB90	ADP,ATP carrier protein	<i>Setaria italica</i>	41.5	2	1.892	1.989
K4A9Z2	Uncharacterized protein	<i>Setaria italica</i>	49.6	2	1.602	1.103
Lipid						
metabolic						
K3YHQ5	Patatin	<i>Setaria italica</i>	47.0	2	1.120	0.646
Unclassified						
K3XLF8	Uncharacterized protein	<i>Setaria italica</i>	27.1	3	1.757	0.879
K3XRI4	Uncharacterized protein	<i>Setaria italica</i>	73.4	2	1.622	2.227
K3XRT1	Histone H2B	<i>Setaria italica</i>	16.5	2	1.688	1.469
K3XSV6	Uncharacterized protein	<i>Setaria italica</i>	13.2	2	1.406	2.052
K3YBS5	Uncharacterized protein (Fragment)	<i>Setaria italica</i>	17.5	2	1.421	1.607
K3YJN4	Uncharacterized protein	<i>Setaria italica</i>	21.9	3	1.421	1.608
K3YJU5	Uncharacterized protein	<i>Setaria italica</i>	17.6	2	1.901	0.960
K3YVX2	Uncharacterized protein	<i>Setaria italica</i>	22.0	4	1.630	1.200
K3YKY2	Uncharacterized protein	<i>Setaria italica</i>	36.7	5	0.860	2.292
K3Z334	Uncharacterized protein	<i>Setaria italica</i>	194.9	3	1.259	1.534
K3Z9P0	Uncharacterized protein	<i>Setaria italica</i>	21.1	17	4.065	1.077
K3YX37	Uncharacterized protein	<i>Setaria italica</i>	9.8	3	0.477	0.622
K3ZA57	Uncharacterized protein	<i>Setaria italica</i>	19.4	2	1.523	1.098
K3ZAC4	Histone H2A	<i>Setaria italica</i>	16.9	4	1.641	1.306
K3ZBZ4	Uncharacterized protein	<i>Setaria italica</i>	17.0	3	0.589	0.739
K3ZQZ3	Uncharacterized protein	<i>Setaria italica</i>	82.5	2	0.597	0.833
K3ZVC8	Uncharacterized protein	<i>Setaria italica</i>	33.8	2	1.643	1.127
K4A4M7	Uncharacterized protein	<i>Setaria italica</i>	269.7	3	2.091	1.519

K4A6U5	Uncharacterized protein	<i>Setaria italica</i>	71.4	5	1.575	1.090
K4A7F0	Uncharacterized protein	<i>Setaria italica</i>	67.4	2	0.717	0.593
K4AAN6	Uncharacterized protein	<i>Setaria italica</i>	43.2	2	0.819	0.581
K4ADV8	Uncharacterized protein	<i>Setaria italica</i>	27.8	2	0.551	0.637
K4AIN6	Uncharacterized protein (Fragment)	<i>Setaria italica</i>	26.7	2	1.517	0.843
K4AIN9	Uncharacterized protein (Fragment)	<i>Setaria italica</i>	21.5	4	2.365	1.019
K4AL19	Uncharacterized protein	<i>Setaria italica</i>	26.8	2	1.305	0.386
K4AM51	Uncharacterized protein	<i>Setaria italica</i>	53.5	7	1.817	0.932
K4AKB3	Uncharacterized protein	<i>Setaria italica</i>	20.3	2	1.167	1.769

SI-Table 3. Differentially expressed protein of peanut root in complete, partial, and no root interactions identified by tandem mass tag (TMT) technique

Accession No.	Protein description	Taxonomy	Molecular weight (kDa)	Matched peptides No.	Accumulated levels	
					NB/SB	MB/SB
N and Protein metabolic						
I1K9C4	Uncharacterized protein	<i>Glycine max</i>	43.0	3	0.667	0.808
O49855	Acid phosphatase	<i>Glycine max</i>	30.1	3	0.430	0.521
A0A762	Calreticulin-1	<i>Glycine max</i>	48.2	2	0.317	0.738
C6EVF9	Elongation factor 1-alpha	<i>Glycine max</i>	49.4	3	1.780	1.618
C6TMV8	Histone H2A	<i>Glycine max</i>	15.6	2	1.676	1.267
C6TBV7	Putative uncharacterized protein	<i>Glycine max</i>	24.8	2	0.614	0.871
Q84TU2	Subtilisin-like seed-specific protein	<i>Arachis</i>	26.8	2	0.656	0.898
K7MOQ7	Uncharacterized protein	<i>Glycine max</i>	223.3	8	0.558	0.641
I1MTB5	Uncharacterized protein	<i>Glycine max</i>	67.8	2	1.270	0.556
I1LMU3	Uncharacterized protein	<i>Glycine max</i>	38.4	3	0.600	0.756
I1KU96	Uncharacterized protein	<i>Glycine max</i>	57.0	5	1.711	1.318
K7MLV5	Uncharacterized protein	<i>Glycine max</i>	46.3	4	0.540	0.782
I1LY10	Uncharacterized protein	<i>Glycine max</i>	39.6	2	0.607	0.711
C metabolic						
F8SMB9	Adenosylhomocysteinase	<i>Glycine max</i>	53.2	5	0.658	0.823
I1LRU3	Beta-amylase	<i>Glycine max</i>	56.0		0.898	0.642
B4UWC7	Malate dehydrogenase	<i>Arachis</i>	14.7		1.524	1.453
I1JCB6	Endochitinase	<i>Glycine max</i>	31.9	2	0.630	1.142
Lipid metabolic						
Q4JME7	Lipoxygenase	<i>Arachis</i>	97.6	2	0.635	0.931
Q42780	Lipoxygenase	<i>Glycine max</i>	96.3	2	0.662	0.828
A0A0D4CI71	Lipoxygenase	<i>Arachis</i>	84.4	2	0.592	0.684

I1LHF4	Patatin	<i>Glycine max</i>	44.1	7	1.265	1.786
A0A0F6VX63	Annexin	<i>Arachis</i>	36.1	4	0.777	0.648
Oxidation-reduction						
B4UWB9	Lipoxygenase 1	<i>Arachis</i>	26.7	6	0.627	0.720
Q76IB7	Apyrase	<i>Glycine max</i>	50.0	4	0.504	0.519
Q06H32	Thioredoxin fold	<i>Arachis</i>	17.4	7	1.385	1.643
I1MUX7	Monocopper oxidase-like protein	<i>Glycine max</i>	66.7	2	0.498	0.941
Transport						
C6SY43	Uncharacterized protein	<i>Glycine max</i>	21.3	2	1.675	1.103
C6TEZ8	Uncharacterized protein	<i>Glycine max</i>	30.8	7	1.699	1.371
K7MBW3	Uncharacterized protein	<i>Glycine max</i>	51.7	5	0.576	1.075
Growth						
Q850G6	Putative lea 4	<i>Arachis</i>	9.7	3	3.149	0.672
Q39801	51 kDa seed maturation protein	<i>Glycine max</i>	51.0	3	2.100	1.002
Other						
A0A0A7E0N9	Uncharacterized protein	<i>Arachis</i>	84.4	3	1.804	1.815
I1K9V8	Uncharacterized protein	<i>Glycine max</i>	29.1	2	0.559	0.677
I1KEA0	Uncharacterized protein	<i>Glycine max</i>	37.9	5	1.014	1.631
I1LZR2	Uncharacterized protein	<i>Glycine max</i>	23.5	2	2.348	1.355
I1N8M4	Uncharacterized protein	<i>Glycine max</i>	22.0	2	0.599	0.876
K7KY20	Uncharacterized protein	<i>Glycine max</i>		2	1.978	1.039
K7LFR7	Uncharacterized protein	<i>Glycine max</i>		2	0.523	1.282
K7LL31	Uncharacterized protein	<i>Glycine max</i>		5	2.002	1.018
K7M3V3	Uncharacterized protein	<i>Glycine max</i>		2	1.322	1.692
K7MY74	Uncharacterized protein	<i>Glycine max</i>		2	0.507	0.678