

Dataset S3. Normalized values of metabolites in roots of chickpea plants. Plants were inoculated with either the *McCP-31* or the *MmSWR19* and grown over a period of 30 d after sowing under Pi-sufficient (+P) or -deficient (-P) conditions. Data presented are the means \pm SE of four independent biological replicates. The values in bold and green indicate a significant increase in -P plants relative to +P plants, whereas the values in bold and red indicate a significant decrease in -P plants relative to +P plants. Data with different letters are significantly different as measured by a Duncan's multiple range test ($P \leq 0.05$).

Normalized values of metabolites	<i>MmSWR19</i>			<i>McCP-31</i>		
	Sufficient-Pi	Deficient-Pi	Response ratio [-P/+P]	Sufficient-Pi	Deficient-Pi	Response ratio [-P/+P]
Amino acids						
L-Glutamine	0.042 \pm 0.006 ^a	0.018 \pm 0.002 ^b	0.42	0.035 \pm 0.003 ^a	0.013 \pm 0.002 ^b	0.37
L-Asparagine	0.260 \pm 0.04 ^{ab}	0.210 \pm 0.03 ^b	0.80	0.390 \pm 0.03 ^a	0.220 \pm 0.05 ^b	0.56
L-Phenylalanine	0.380 \pm 0.02 ^a	0.360 \pm 0.01 ^a	0.94	0.350 \pm 0.04 ^a	0.400 \pm 0.02 ^a	1.14
GABA	0.280 \pm 0.07 ^b	0.410 \pm 0.09 ^{ab}	1.46	0.450 \pm 0.04 ^{ab}	0.530 \pm 0.08 ^a	1.78
L-Homoserine	0.163 \pm 0.01 ^{ab}	0.127 \pm 0.01 ^b	0.78	0.126 \pm 0.01 ^b	0.195 \pm 0.01 ^a	1.54
L-Threonine	0.180 \pm 0.02 ^a	0.200 \pm 0.02 ^a	1.12	0.200 \pm 0.02 ^a	0.190 \pm 0.03 ^a	0.95
D-Isoleucine	0.002 \pm 0.0002 ^a	0.002 \pm 0.0002 ^a	1.05	0.002 \pm 0.0002 ^a	0.0027 \pm 0.0003 ^a	1.03
L-Alanine	0.103 \pm 0.03 ^a	0.075 \pm 0.02 ^a	0.72	0.113 \pm 0.02 ^a	0.114 \pm 0.01 ^a	1.00
L-Valine	0.168 \pm 0.01 ^a	0.166 \pm 0.01 ^a	0.98	0.177 \pm 0.01 ^a	0.151 \pm 0.02 ^a	0.85
L-Serine	0.420 \pm 0.04 ^{ab}	0.460 \pm 0.02 ^{ab}	1.09	0.490 \pm 0.04 ^a	0.370 \pm 0.02 ^b	0.75
3-Cyano-L-alanine	0.022 \pm 0.002 ^a	0.016 \pm 0.0007 ^a	0.72	0.017 \pm 0.003 ^a	0.017 \pm 0.002 ^a	1.00
Methionine	0.020 \pm 0.004 ^a	0.007 \pm 0.001 ^b	0.35	0.019 \pm 0.003 ^a	0.013 \pm 0.002 ^{ab}	0.68
L-Aspartate	0.093 \pm 0.01 ^a	0.051 \pm 0.003 ^b	0.54	0.079 \pm 0.008 ^{ab}	0.054 \pm 0.009 ^b	0.68
L-Glutamate	0.008 \pm 0.001 ^a	0.006 \pm 0.0003 ^a	0.75	0.009 \pm 0.001 ^a	0.007 \pm 0.0008 ^a	0.78
L-Cystine	0.003 \pm 0.0002 ^a	0.002 \pm 0.0001 ^b	0.64	0.0014 \pm 0.0003 ^b	0.0018 \pm 0.0001 ^b	1.28
Glycine	0.014 \pm 0.001 ^b	0.020 \pm 0.001 ^a	1.42	0.016 \pm 0.006 ^b	0.014 \pm 0.001 ^b	0.87
L-Lysine	0.021 \pm 0.007 ^b	0.023 \pm 0.001 ^b	1.09	0.040 \pm 0.001 ^a	0.022 \pm 0.001 ^b	0.55
L-Tyrosine	0.002 \pm 0.0005 ^a	0.003 \pm 0.0005 ^a	1.42	0.002 \pm 0.0003 ^a	0.002 \pm 0.0001 ^a	1.00
L-Tryptophan	0.100 \pm 0.006 ^a	0.040 \pm 0.007 ^b	0.40	0.087 \pm 0.007 ^a	0.052 \pm 0.012 ^b	0.59
L-5-Oxoproline	0.412 \pm 0.06 ^b	0.341 \pm 0.018 ^b	0.82	0.365 \pm 0.03 ^{ab}	0.271 \pm 0.03 ^a	0.74
Hydroxylamine	0.035 \pm 0.003 ^a	0.0083 \pm 0.001 ^c	0.23	0.032 \pm 0.004 ^a	0.022 \pm 0.003 ^b	0.68

L-Proline	0.022±0.001 ^a	0.018±0.0006 ^b	0.81	0.023±0.0008 ^a	0.019±0.0007 ^b	0.82
L-Histidine	0.00023±0.00008 ^{ab}	0.00013±0.00002 ^b	0.56	0.0002±0.00003 ^{ab}	0.0003±0.00002 ^a	1.50
L-Leucine	0.00400±0.002 ^a	0.002±0.001 ^a	0.50	0.005±0.003 ^a	0.001±0.001 ^a	0.20
L-Ornithine	0.00190±0.0008 ^b	0.0103±0.003 ^a	5.40	0.002±0.0009 ^b	0.0021±0.0002 ^b	1.05
Sugars						
D-Arabinose	0.124±0.01 ^a	0.088±0.006 ^b	0.70	0.073±0.01 ^b	0.084±0.006 ^b	1.15
D-Fructose	11.70±2.30 ^b	12.37±2.1 ^b	1.05	37.19±5.0 ^a	17.40±0.50 ^b	0.46
D-Fructose-6P	0.188±0.01 ^a	0.100±0.003 ^b	0.53	0.131±0.01 ^b	0.129±0.003 ^b	0.98
D-Glucose-6P	0.225±0.007 ^a	0.033±0.006 ^d	0.14	0.143±0.01 ^b	0.096±0.005 ^c	0.67
Sucrose	0.740±0.1 ^a	0.600±0.01 ^a	0.81	0.593±0.02 ^a	0.624±0.036 ^a	1.05
myo-Inositol-1P	0.171±0.007 ^a	0.082±0.01 ^{bc}	0.48	0.109±0.009 ^b	0.075±0.003 ^c	0.68
D-Trehalose	0.280±0.07 ^a	0.183±0.01 ^a	0.65	0.263±0.02 ^a	0.210±0.03 ^a	0.79
D-Ribose	0.054±0.003 ^a	0.054±0.009 ^a	1.00	0.055±0.01 ^a	0.066±0.001 ^a	1.20
Isomaltose	0.0094±0.004 ^a	0.0078±0.002 ^a	0.83	0.011±0.001 ^a	0.0073±0.0009 ^a	0.66
D-Saccharate	0.330±0.04 ^b	0.690±0.02 ^a	2.00	0.290±0.006 ^b	0.630±0.04 ^a	2.17
meso-Erythritol	0.0014±0.0004 ^a	0.0024±0.0009 ^a	1.71	0.0007±0.0003 ^a	0.0008±0.0003 ^a	1.14
1,6-Anhydro-β-D-glucose	1.650±0.09 ^{ab}	1.700±0.13 ^{ab}	1.03	1.560±0.05 ^b	1.730±0.07 ^a	1.10
Glycerate	0.089±0.01 ^a	0.053±0.002 ^b	0.59	0.084±0.007 ^a	0.078±0.007 ^{ab}	0.92
myo-Inositol	46.21±4.50 ^a	29.44±1.7 ^b	0.63	35.37±2.20 ^b	35.98±3.80 ^{ab}	1.01
Glycerol	0.062±0.005 ^a	0.008±0.002 ^d	0.13	0.048±0.002 ^b	0.023±0.002 ^c	0.48
D-Arabitol	0.048±0.004 ^a	0.027±0.002 ^b	0.56	0.032±0.002 ^b	0.029±0.0007 ^b	0.90
D-Glucose	0.096±0.008 ^b	0.096±0.01 ^b	1.00	0.183±0.01 ^{ab}	0.260±0.07 ^a	1.42
D-Raffinose	0.027±0.003 ^b	0.060±0.01 ^{ab}	2.20	0.118±0.04 ^a	0.128±0.03 ^a	1.08
Galactinol	0.010±0.0007 ^b	0.021±0.001 ^a	2.10	0.011±0.003 ^b	0.014±0.003 ^{ab}	1.27
Organic acids						
Citrate	88.30±6.60 ^a	66.29±10.3 ^{ab}	0.75	55.36±4.70 ^b	53.05±6.50 ^b	0.95
α-Ketoglutarate	0.154±0.01 ^b	0.165±0.01 ^b	1.07	0.164±0.006 ^b	0.217±0.016 ^a	1.32
L-Malate	93.77±5.50 ^a	52.89±3.10 ^b	0.56	57.95±5.30 ^b	86.50±5.20 ^a	1.49
L-Citramalate	0.0021±0.0006 ^b	0.006±0.0007 ^{ab}	2.80	0.0031±0.0004 ^b	0.0092±0.0027 ^a	2.96
L-Threonate	0.950±0.16 ^b	1.700±0.08 ^a	1.07	0.530±0.01 ^c	1.030±0.18 ^b	1.32
Fumarate	0.390±0.03 ^a	0.420±0.05 ^a	1.07	0.320±0.06 ^a	0.320±0.06 ^a	1.00
Succinate	3.360±0.21 ^{ab}	2.730±0.22 ^b	0.81	2.590±0.05 ^b	3.850±0.40 ^a	1.48
Glycolate	0.068±0.001 ^a	0.054±0.006 ^b	0.79	0.064±0.003 ^{ab}	0.064±0.004 ^{ab}	1.00

Pyruvate	0.065±0.01 ^a	0.069±0.008 ^a	1.06	0.082±0.01 ^a	0.082±0.01 ^a	1.00
Malonate	157.7±7.2 ^a	103.0±11.0 ^c	0.65	119.6±4.40 ^{bc}	141.1±2.60 ^{ab}	1.17
Itaconate	0.146±0.03 ^{ab}	0.105±0.009 ^{ab}	0.72	0.094±0.01 ^b	0.180±0.03 ^a	1.91
Galactonate	0.395±0.01 ^a	0.442±0.01 ^a	1.11	0.329±0.03 ^b	0.452±0.004 ^a	1.37
Threonic acid-1,4-lactone	0.022±0.03 ^a	0.017±0.001 ^{ab}	0.77	0.007±0.0003 ^c	0.013±0.001 ^b	1.10
Shikimate	0.028±0.004 ^a	0.026±0.004 ^a	0.92	0.016±0.001 ^b	0.025±0.0008 ^{ab}	1.56
Isocitrate	0.0089±0.0005 ^a	0.0066±0.001 ^b	0.74	0.005±0.0004 ^b	0.0053±0.0007 ^b	1.06
Suberic acid	0.0029±0.0005 ^a	0.0025±0.0007 ^a	0.86	0.0021±0.00005 ^a	0.0024±0.0004 ^a	1.14
Glutarate	0.0023±0.0006 ^a	0.0011±0.0004 ^a	0.43	0.0008±0.0001 ^a	0.0022±0.0005 ^a	2.75
Other metabolites						
Spermidine	0.460±0.048 ^a	0.350±0.01 ^a	0.76	0.402±0.07 ^a	0.455±0.04 ^a	1.13
Serotonin	0.114±0.03 ^a	0.106±0.03 ^a	0.92	0.043±0.01 ^a	0.069±0.03 ^a	1.60
Oleic acid (18:1)	0.660±0.34 ^a	0.240±0.11 ^a	0.36	0.280±0.09 ^a	0.240±0.01 ^a	0.85
Nicotianamine	0.064±0.02 ^a	0.045±0.01 ^a	0.70	0.093±0.04 ^a	0.068±0.01 ^a	0.73
Sitosterol	0.060±0.002 ^a	0.035±0.003 ^b	0.58	0.049±0.004 ^{ab}	0.034±0.007 ^b	0.69
Luteolin	0.193±0.03 ^a	0.138±0.03 ^{ab}	0.71	0.134±0.01 ^{ab}	0.082±0.01 ^b	0.61
5,6-Dihydrouracil	0.610±0.3 ^b	0.210±0.008 ^b	0.34	0.200±0.005 ^b	14.21±1.31 ^a	71.00
Tryptamine	0.318±0.04 ^a	0.291±0.02 ^a	0.91	0.449±0.18 ^a	0.303±0.06 ^a	0.67
Phosphate	123.0±7.20 ^a	27.00±7.80 ^c	0.22	112.0±7.40 ^{ab}	95.00±2.72 ^b	0.84
D-Pinitol	140.1±8.40 ^a	102.3±3.80 ^b	0.73	136.3±3.00 ^a	97.16±1.50 ^b	0.71
Stigmasterol	0.270±0.07 ^a	0.190±0.01 ^a	0.70	0.152±0.03 ^a	0.211±0.02 ^a	1.38
Palmitic acid (16:0)	0.016±0.002 ^{ab}	0.018±0.0007 ^a	1.12	0.010±0.001 ^b	0.013±0.003 ^{ab}	1.30
Nicotinate	0.010±0.001 ^a	0.010±0.0005 ^a	1.00	0.007±0.0006 ^b	0.007±0.002 ^b	1.00
<i>trans</i> -Caffeic acid	0.022±0.004 ^a	0.011±0.001 ^b	0.50	0.001±0.002 ^b	0.020±0.001 ^a	20.00
1,3-Diaminopropane	0.0052±0.001 ^a	0.0032±0.001 ^a	0.61	0.004±0.0004 ^a	0.0042±0.0006 ^a	1.05
Phytol	0.0054±0.0004 ^a	0.003±0.0003 ^b	0.56	0.0036±0.0003 ^b	0.0031±0.0001 ^b	0.86
Apigenin	0.0010±0.0003 ^{ab}	0.0005±0.0001 ^b	0.50	0.001±0.0002 ^{ab}	0.0015±0.0002 ^a	1.50
Putrescine	0.000028±0.000003 ^a	0.00002±0.000002 ^a	0.71	0.000023±0.000002 ^a	0.00002±0.000001 ^a	0.86
Allantoin	0.0001±0.00002 ^a	0.0001±0.00006 ^a	1.00	0.00006±0.000007 ^a	0.00007±0.00002 ^a	1.16