

Dataset S4. Normalized values of metabolites in leaves 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>		Response ratio [-P/+P]	<i>McCP-31</i>		Response ratio [-P/+P]
	Sufficient-Pi	Deficient-Pi		Sufficient-Pi	Deficient-Pi	
Amino acids						
L-Glutamine	0.036 \pm 0.01 ^a	0.011 \pm 0.002 ^b	0.30	0.046 \pm 0.001 ^a	0.013 \pm 0.001 ^b	0.25
L-Asparagine	0.320 \pm 0.08 ^a	0.060 \pm 0.006 ^b	0.18	0.280 \pm 0.06 ^a	0.053 \pm 0.006 ^b	0.18
L-Phenylalanine	0.744 \pm 0.03 ^a	0.438 \pm 0.01 ^b	0.58	0.771 \pm 0.06 ^a	0.395 \pm 0.07 ^b	0.51
GABA	0.230 \pm 0.05 ^a	0.260 \pm 0.02 ^a	1.13	0.280 \pm 0.05 ^a	0.190 \pm 0.02 ^a	0.67
L-Homoserine	0.067 \pm 0.007 ^{ab}	0.093 \pm 0.01 ^a	1.38	0.065 \pm 0.01 ^{ab}	0.041 \pm 0.008 ^b	0.63
L-Threonine	1.990 \pm 0.44 ^b	2.120 \pm 0.07 ^b	1.06	4.530 \pm 0.23 ^a	1.450 \pm 0.21 ^b	0.32
D-Isoleucine	0.064 \pm 0.007 ^a	0.075 \pm 0.01 ^{ab}	1.17	0.156 \pm 0.04 ^a	0.050 \pm 0.02 ^b	0.32
L-Alanine	0.440 \pm 0.18 ^a	0.472 \pm 0.05 ^a	1.07	0.479 \pm 0.08 ^a	0.242 \pm 0.01 ^a	0.50
L-Valine	0.867 \pm 0.18 ^{ab}	0.960 \pm 0.007 ^{ab}	1.10	1.050 \pm 0.1 ^a	0.604 \pm 0.01 ^b	0.57
L-Serine	9.100 \pm 1.3 ^b	11.00 \pm 0.92 ^b	1.20	36.00 \pm 1.3 ^a	13.69 \pm 1.90 ^b	0.38
3-Cyano-L-alanine	0.036 \pm 0.01 ^{ab}	0.035 \pm 0.004 ^{ab}	0.97	0.096 \pm 0.04 ^a	0.014 \pm 0.001 ^b	0.14
Methionine	0.015 \pm 0.002 ^b	0.015 \pm 0.005 ^b	1.00	0.088 \pm 0.002 ^a	0.0045 \pm 0.001 ^b	0.05
L-Aspartate	0.582 \pm 0.10 ^b	0.459 \pm 0.03 ^{bc}	0.78	1.640 \pm 0.07 ^a	0.257 \pm 0.05 ^c	0.15
L-Glutamate	0.201 \pm 0.04 ^b	0.192 \pm 0.01 ^b	0.95	0.515 \pm 0.01 ^a	0.114 \pm 0.01 ^c	0.22
L-Cystine	0.011 \pm 0.0002 ^a	0.011 \pm 0.0003 ^a	1.00	0.008 \pm 0.001 ^b	0.005 \pm 0.001 ^c	0.62
Glycine	0.041 \pm 0.001 ^a	0.024 \pm 0.0009 ^b	0.58	0.043 \pm 0.002 ^a	0.022 \pm 0.002 ^b	0.51
L-Lysine	0.095 \pm 0.01 ^{ab}	0.073 \pm 0.008 ^b	0.76	0.114 \pm 0.01 ^a	0.033 \pm 0.003 ^c	0.28
L-Tyrosine	0.023 \pm 0.007 ^a	0.011 \pm 0.003 ^a	0.47	0.039 \pm 0.02 ^a	0.021 \pm 0.007 ^a	0.53
L-Tryptophan	0.172 \pm 0.06 ^a	0.163 \pm 0.04 ^a	0.94	0.107 \pm 0.01 ^a	0.104 \pm 0.03 ^a	0.97
L-5-Oxoproline	2.800 \pm 0.55 ^b	2.620 \pm 0.13 ^b	0.93	5.700 \pm 0.24 ^a	1.820 \pm 0.13 ^b	0.31
Hydroxylamine	0.007 \pm 0.003 ^{ab}	0.015 \pm 0.004 ^a	2.10	0.0037 \pm 0.0008 ^b	0.011 \pm 0.0015 ^{ab}	2.90
L-Proline	0.103 \pm 0.005 ^b	0.094 \pm 0.005 ^{ab}	0.91	0.152 \pm 0.005 ^a	0.073 \pm 0.01 ^c	0.48

L-Histidine	0.0005±0.00005 ^b	0.0005±0.00003 ^b	1.00	0.001±0.00009 ^a	0.0005±0.0001 ^b	0.50
L-Leucine	0.0065±0.001 ^a	0.0086±0.0007 ^a	1.32	0.0063±0.0008 ^a	0.0088±0.001 ^a	1.39
L-Ornithine	0.034±0.008 ^a	0.038±0.009 ^a	1.11	0.0017±0.0007 ^b	0.017±0.004 ^a	10.00
Sugars						
D-Arabinose	0.119±0.05 ^a	0.048±0.01 ^{ab}	0.40	0.039±0.005 ^{ab}	0.010±0.002 ^b	0.25
D-Fructose	130.8±13.6 ^a	90.00±9.70 ^b	0.68	123.5±5.50 ^a	67.72±3.70 ^b	0.54
D-Fructose-6P	0.567±0.05 ^{ab}	0.702±0.04 ^a	1.23	0.489±0.06 ^{bc}	0.358±0.05 ^c	0.73
D-Glucose-6P	0.424±0.02 ^a	0.265±0.03 ^b	0.63	0.296±0.01 ^b	0.152±0.02 ^c	0.51
Sucrose	0.833±0.01 ^a	0.777±0.03 ^a	0.93	0.560±0.03 ^b	0.560±0.03 ^b	1.00
myo-Inositol-1P	0.389±0.04 ^a	0.286±0.02 ^b	0.85	0.430±0.02 ^a	0.259±0.008 ^b	0.60
D-Trehalose	0.731±0.30 ^b	1.830±0.30 ^a	2.50	0.100±0.03 ^b	0.460±0.02 ^b	4.60
D-Ribose	0.085±0.007 ^b	0.107±0.006 ^a	1.25	0.126±0.006 ^a	0.086±0.004 ^b	0.68
Isomaltose	0.0078±0.001 ^a	0.0109±0.001 ^a	1.39	0.0078±0.001 ^a	0.0076±0.001 ^a	0.97
D-Saccharate	9.700±2.50 ^b	8.300±0.50 ^b	0.85	12.30±0.83 ^a	4.600±0.07 ^c	0.37
meso-Erythritol	0.960±0.20 ^b	1.750±0.17 ^{ab}	1.82	0.832±0.05 ^b	2.400±0.48 ^a	2.80
1,6-Anhydro-β-D-glucose	7.500±0.26 ^b	7.660±0.29 ^b	1.02	12.45±0.12 ^a	6.170±0.71 ^b	0.49
Glycerate	0.197±0.05 ^{ab}	0.278±0.02 ^a	1.41	0.152±0.01 ^b	0.115±0.01 ^b	0.75
myo-Inositol	137.6±12.7 ^b	147.5±5.90 ^{ab}	1.07	165.0±5.80 ^a	134.0±3.00 ^b	0.81
Glycerol	0.049±0.001 ^b	0.024±0.001 ^c	0.48	0.061±0.002 ^a	0.021±0.003 ^c	0.34
D-Arabitol	2.140±0.19 ^a	1.590±0.11 ^b	0.74	2.360±0.16 ^a	1.680±0.05 ^b	0.71
D-Glucose	0.882±0.17 ^a	0.271±0.03 ^b	0.30	0.430±0.07 ^b	0.192±0.02 ^b	0.44
D-Raffinose	0.0124±0.003 ^{ab}	0.020±0.003 ^b	1.61	0.0017±0.0006 ^b	0.029±0.009 ^a	17.0
Galactinol	0.572±0.11 ^a	0.287±0.075 ^{ab}	0.50	0.035±0.01 ^b	0.335±0.12 ^a	9.50
Organic acids						
Citrate	149.2±20.0 ^{ab}	148.6±12.3 ^{ab}	0.99	185.0±14 ^a	118.9±10.0 ^b	0.64
L-Malate	243.0±14.0 ^a	166.0±8.90 ^b	0.68	223.5±5.6 ^a	152.1±23.3 ^b	0.68
L-Citramalate	0.114±0.057 ^b	0.117±0.005 ^b	1.02	0.401±0.046 ^a	0.086±0.01 ^b	0.21
L-Threonate	48.13±3.20 ^b	30.60±1.22 ^c	0.63	75.70±6.0 ^a	34.26±2.70 ^c	0.45
Fumarate	1.79±0.10 ^{ab}	1.080±0.03 ^{bc}	0.60	2.310±0.3 ^a	0.540±0.13 ^b	0.23
Succinate	19.68±0.94 ^b	11.46±0.76 ^c	0.58	25.45±2.3 ^a	12.39±1.48 ^c	0.48
Glycolate	0.075±0.002 ^b	0.117±0.007 ^a	1.56	0.079±0.009 ^b	0.065±0.002 ^b	0.82
Pyruvate	0.078±0.02 ^b	0.147±0.02 ^a	1.88	0.165±0.01 ^a	0.067±0.007 ^b	0.40
Malonate	0.940±0.09 ^a	0.530±0.06 ^b	0.56	0.660±0.10 ^{ab}	0.590±0.10 ^b	0.89

Itaconate	0.129±0.02 ^{ab}	0.145±0.02 ^{ab}	1.12	0.157±0.03 ^a	0.065±0.010 ^b	0.41
D-Quinate	10.20±1.16 ^a	12.91±0.60 ^a	1.26	4.809±1.04 ^b	5.360±0.40 ^b	1.09
Glutarate	55.42±1.70 ^a	43.63±1.30 ^b	0.78	52.15±3.60 ^a	28.82±3.30 ^c	0.55
Threonic acid-1,4-lactone	1.340±0.40 ^b	0.679±0.07 ^b	0.50	4.590±0.69 ^a	1.690±0.10 ^b	0.36
Shikimate	0.130±0.01 ^a	0.051±0.006 ^{bc}	0.39	0.082±0.01 ^b	0.033±0.007 ^c	0.40
Isocitrate	0.035±0.005 ^a	0.016±0.002 ^b	0.45	0.033±0.002 ^a	0.016±0.002 ^b	0.48
Suberic acid	0.0004±0.0001 ^a	0.0008±0.0002 ^a	2.00	0.0014±0.0005 ^a	0.0006±0.0001 ^a	0.42
Galactonate	55.420±1.76 ^a	43.63±1.35 ^b	0.78	52.15±3.59 ^a	28.82±3.37 ^c	0.55
Other metabolites						
Spermidine	6.180±0.50 ^a	3.760±0.30 ^b	0.60	5.270±0.30 ^a	4.060±0.02 ^b	0.77
α -Linolenic acid (18:3)	9.670±2.49 ^b	6.930±1.45 ^{bc}	0.71	20.00±1.28 ^a	3.650±0.77 ^c	0.18
Serotonin	2.630±0.33 ^{ab}	2.990±0.27 ^{ab}	1.13	3.830±0.50 ^a	2.040±0.41 ^b	0.53
Sitosterol	1.104±0.16 ^{ab}	0.868±0.19 ^b	0.78	1.160±0.13 ^{ab}	1.510±0.16 ^a	1.30
Luteolin	0.049±0.005 ^a	0.026±0.005 ^b	0.54	0.051±0.007 ^a	0.036±0.008 ^{ab}	0.70
5,6-Dihydrouracil	18.97±1.10 ^a	14.99±0.57 ^b	0.79	11.34±0.59 ^c	9.740±0.33 ^c	0.85
Tryptamine	0.365±0.01 ^a	0.331±0.052 ^a	0.90	0.387±0.07 ^a	0.252±0.043 ^a	0.65
Phosphate	120.3±11.7 ^a	41.38±5.90 ^b	0.34	111.9±9.80 ^a	55.73±9.80 ^b	0.49
D-Pinitol	417.2±26.1 ^a	399.9±6.17 ^a	0.95	133.0±2.40 ^b	367.9±25.1 ^a	2.70
Stigmasterol	0.037±0.01 ^a	0.015±0.005 ^b	0.40	0.047±0.01 ^{ab}	0.040±0.006 ^{ab}	0.85
Palmitic acid (16:0)	0.034±0.001 ^{ab}	0.025±0.006 ^{bc}	0.73	0.046±0.005 ^a	0.015±0.002 ^c	0.32
Nicotinate	0.079±0.01 ^a	0.032±0.004 ^b	0.40	0.104±0.01 ^a	0.030±0.005 ^b	0.28
<i>trans</i> -Caffeic acid	0.016±0.002 ^b	0.032±0.008 ^b	2.00	0.040±0.003 ^a	0.015±0.003 ^b	0.37
1,3-Diaminopropane	0.019±0.001 ^b	0.043±0.005 ^a	2.26	0.026±0.003 ^b	0.015±0.001 ^b	0.57
Phytol	0.195±0.02 ^b	0.161±0.006 ^b	0.82	0.253±0.009 ^a	0.166±0.016 ^b	0.65
Apigenin	0.0006±0.0001 ^{ab}	0.0008±0.00006 ^{ab}	1.34	0.0011±0.0002 ^a	0.0003±0.0001 ^b	0.27
Putrescine	0.00005±0.000001 ^b	0.00006±0.000002 ^a	1.20	0.00006±0.000004 ^a	0.00005±0.000001 ^b	0.83
Allantoin	0.0002±0.00006 ^a	0.0002±0.00003 ^a	1.00	0.0003±0.00003 ^a	0.00018±0.00002 ^a	0.60