

Table S1. List of contents of amino acids in root of rice and wheat

| | rice (nmol/mL) | | | | wheat (nmol/mL) | | | |
|-----------------|----------------|--------|---------|-------|-----------------|--------|---------|--------|
| | control | | flood | | control | | flood | |
| | mean | ± SD | mean | ± SD | mean | ± SD | mean | ± SD |
| P-Ser | 9.52 | 0.49 | 12.96 | 0.18 | 8.12 | 1.02 | 10.91 | 0.50 |
| PEA | 0.00 | 0.00 | 30.15 | 0.71 | 0.00 | 0.00 | 58.59 | 1.85 |
| Asp | 161.19 | 5.50 | 414.45 | 8.35 | 174.75 | 18.94 | 129.00 | 0.63 |
| Thr | 35.89 | 0.39 | 89.49 | 6.87 | 83.44 | 11.76 | 189.28 | 6.34 |
| Ser | 109.30 | 1.43 | 224.05 | 22.21 | 115.59 | 13.59 | 186.88 | 9.71 |
| Asn | 28.31 | 0.00 | 82.19 | 17.45 | 525.75 | 133.52 | 1465.73 | 123.76 |
| Glu | 202.72 | 62.41 | 436.12 | 26.29 | 305.14 | 25.55 | 610.62 | 47.92 |
| Gln | 71.78 | 37.78 | 155.62 | 4.09 | 573.29 | 194.15 | 628.38 | 57.82 |
| Gly | 20.43 | 24.76 | 123.61 | 42.42 | 77.29 | 34.79 | 146.18 | 2.18 |
| Ala | 69.00 | 4.76 | 667.58 | 99.78 | 263.65 | 60.28 | 2816.53 | 197.49 |
| a-ABA | 0.00 | 0.00 | 12.02 | 1.87 | 0.00 | 0.00 | 30.27 | 2.13 |
| Val | 85.44 | 6.67 | 191.92 | 15.74 | 140.60 | 26.47 | 358.29 | 6.21 |
| Met | 91.54 | 4.15 | 97.68 | 1.68 | 93.30 | 3.31 | 105.34 | 2.62 |
| Ile | 74.00 | 8.59 | 137.35 | 12.52 | 128.17 | 22.91 | 281.43 | 6.09 |
| Leu | 85.96 | 11.50 | 184.66 | 22.43 | 164.33 | 31.95 | 384.26 | 6.93 |
| Tyr | 21.29 | 0.87 | 66.53 | 7.14 | 28.68 | 4.91 | 82.11 | 1.52 |
| Phe | 14.90 | 1.11 | 54.45 | 6.24 | 19.45 | 3.04 | 73.76 | 1.24 |
| GABA | 43.75 | 9.97 | 1191.41 | 91.33 | 73.66 | 10.75 | 1671.63 | 128.41 |
| MEA | 0.00 | 0.00 | 70.10 | 23.39 | 0.00 | 0.00 | 0.00 | 0.00 |
| NH ₃ | 343.37 | 135.66 | 507.34 | 62.85 | 387.68 | 69.54 | 316.77 | 34.85 |
| Orn | 0.00 | 0.00 | 17.17 | 5.73 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1M-His | 0.00 | 0.00 | 57.93 | 5.71 | 0.00 | 0.00 | 90.45 | 3.55 |
| His | 45.59 | 0.91 | 110.20 | 6.03 | 68.81 | 9.19 | 146.75 | 5.64 |
| Lys | 28.94 | 1.42 | 121.67 | 11.70 | 19.71 | 5.37 | 131.15 | 7.96 |
| Arg | 24.96 | 2.14 | 92.79 | 5.62 | 0.00 | 0.00 | 104.08 | 4.31 |
| Pro | 53.91 | 3.76 | 108.25 | 22.68 | 84.40 | 19.38 | 351.72 | 31.21 |

The data are presented as mean ± S.D. from 3 independent biological replicates.