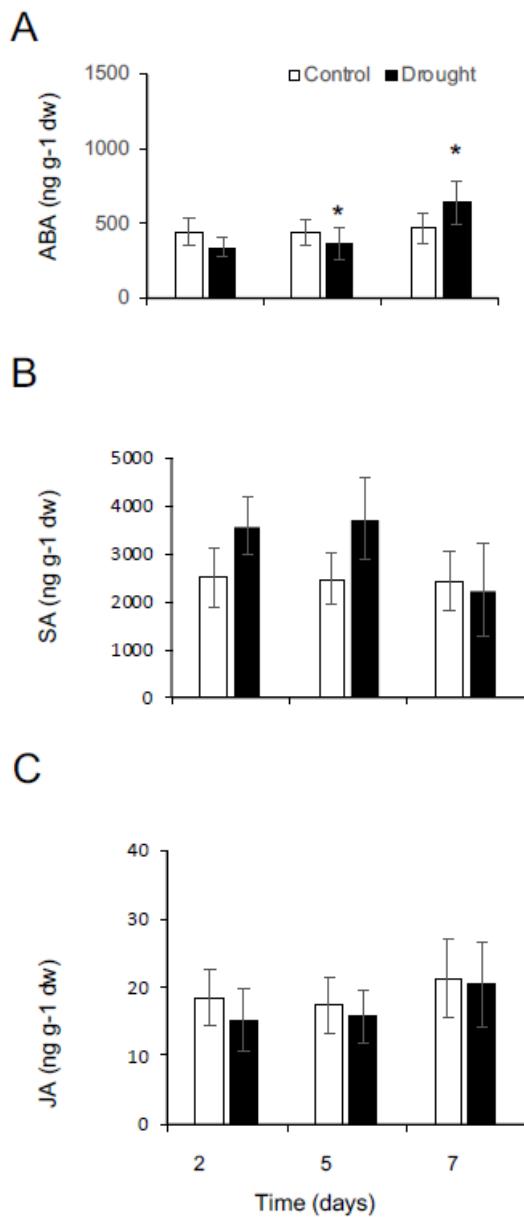
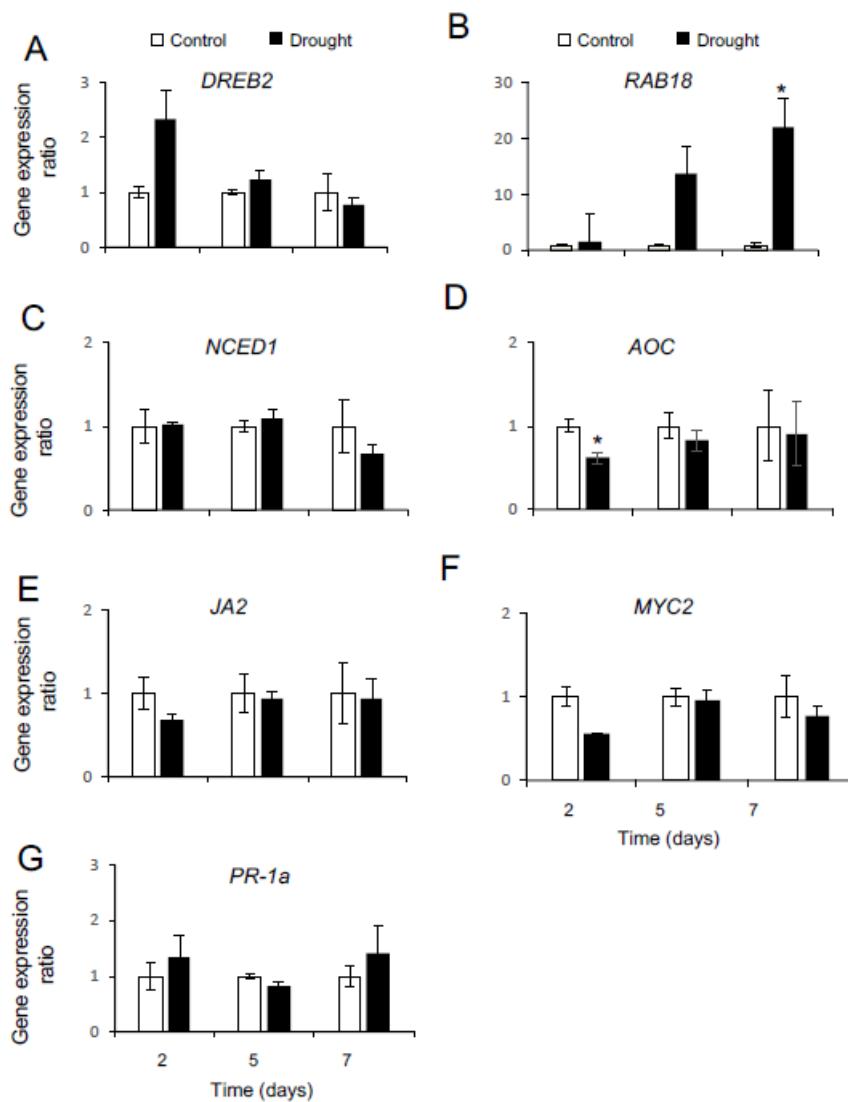


**Figure S1.** Tomato characterization during moderate drought imposition. (A) saturation weight measurements in moderate drought tomato experiment 1 (Exp1, dotted lines) and experiment 2 (Exp2, continuous lines) during the water stress imposition in control plants (black line) and drought stressed plants (red line), (B) Stem growth (stem length) and (C) photosynthetic activity ( $F_v/F_m$ ) in drought stressed plants after two, five and seven days of water withdrawal. Data are mean  $\pm$  SE of seven replicates/treatment from two independent experiments. Asterisk indicates significant differences of each treatment respect its control (Student's t-test,  $p < 0.05$ ).



**Figure S2.** Hormone profiling of tomato plants under moderate water stress conditions. (A) ABA, (B) SA and, (C) JA endogenous levels in well-watered plants (Control) and drought-stressed plants (Drought) at two, five and seven days after water withdrawal. Data are mean  $\pm$  SE of seven replicates/treatment from two independent experiments. Plant treatment was analysed by two-way ANOVA considering the experiment replica as a fixed factor. Asterisk indicates significant differences of each treatment respect its control ( $p < 0.05$ ).



**Figure S3.** Stress-marker gene expression analysis of tomato plants under moderate drought stress. The expression of (A) DREB2, (B) RAB18, (C) NCED1, (D) AOC, (E) MYC2, (F) JA2, and (G) PR-1a genes were analysed in well-watered plants (Control) and drought-stressed plants (Drought) at two, five and seven days after water withdrawal. Gene expression calculated as normalized relative quantities (NRQ) values are represented as gene expression ratio compared to its control sample for each time point. Data are mean  $\pm$  SE of seven replicates/treatment from two independent experiments. Plant treatment was analysed by two-tailed Student's t-test. Asterisk indicates significant differences of each treatment respect its control ( $p < 0.05$ ).

**Table S1.** Detailed results of the statistical analysis for phytohormones and gene expression during water stress imposition. A) ANOVA analysis (drought and replica as fixed factors) for phytohormones data. Data were  $\log_{10}(x)$  transformed. In bold the significant factors ( $p < 0.05$ ). B) Student's t-test analysis for gene expression data. Data were normalized with respect to their corresponding control within each replica. In bold the significant factors ( $p < 0.05$ , adjusted for not equal variances). Degrees of freedom –df, p value –p, t-Student statistic value –t and F-statistic value –F are indicated.

| A)  |         |        |      |              |         |      |                 |       |      |       |   |
|-----|---------|--------|------|--------------|---------|------|-----------------|-------|------|-------|---|
|     | Drought |        |      | Replica      |         |      | Drought*Replica |       |      | df    | p |
|     | F       | df     | p    | F            | df      | p    | F               | df    | p    |       |   |
| ABA | 2d      | 2.926  | 1,10 | 0.118        | 91.553  | 1,10 | 0.000           | 4.145 | 1,10 | 0.069 |   |
|     | 5d      | 8.023  | 1,10 | <b>0.018</b> | 216.718 | 1,10 | <b>0.000</b>    | 0.129 | 1,10 | 0.727 |   |
|     | 7d      | 20.081 | 1,10 | <b>0.001</b> | 267.959 | 1,10 | <b>0.000</b>    | 0.789 | 1,10 | 0.395 |   |

|           |    |       |      |       |        |      |              |       |      |       |
|-----------|----|-------|------|-------|--------|------|--------------|-------|------|-------|
| <b>SA</b> | 2d | 3.752 | 1,10 | 0.081 | 15.937 | 1,10 | <b>0.003</b> | 0.086 | 1,10 | 0.775 |
|           | 5d | 4.138 | 1,10 | 0.069 | 19.094 | 1,10 | <b>0.001</b> | 0.428 | 1,10 | 0.528 |
|           | 7d | 1.087 | 1,10 | 0.322 | 11.963 | 1,10 | <b>0.006</b> | 0.023 | 1,10 | 0.882 |
| <b>JA</b> | 2d | 3.563 | 1,10 | 0.088 | 28.411 | 1,10 | <b>0.000</b> | 0.064 | 1,10 | 0.806 |
|           | 5d | 1.135 | 1,10 | 0.312 | 77.164 | 1,10 | <b>0.000</b> | 0.380 | 1,10 | 0.552 |
|           | 7d | 0.026 | 1,10 | 0.876 | 43.181 | 1,10 | <b>0.000</b> | 0.096 | 1,10 | 0.764 |

**B)**

|              | 2 days |    |              | 5 days |    |       | 7 days |    |              |
|--------------|--------|----|--------------|--------|----|-------|--------|----|--------------|
|              | t      | df | p            | t      | df | p     | t      | df | p            |
|              | Genes  |    |              |        |    |       |        |    |              |
| <b>DREB2</b> | -0.964 | 6  | 0.388        | -1.706 | 6  | 0.163 | 0.969  | 6  | 0.402        |
| <b>RAB18</b> | -3.111 | 6  | 0.053        | -2.108 | 6  | 0.124 | -4.211 | 6  | <b>0.024</b> |
| <b>NCED1</b> | -1.186 | 6  | 0.317        | -0.371 | 6  | 0.733 | 0.541  | 6  | 0.626        |
| <b>AOC</b>   | 3.256  | 6  | <b>0.044</b> | -0.152 | 6  | 0.889 | -0.924 | 6  | 0.423        |
| <b>MYC2</b>  | 2.760  | 6  | 0.063        | 0.503  | 6  | 0.646 | 1.298  | 6  | 0.283        |
| <b>JA2</b>   | 2.990  | 6  | 0.054        | -0.286 | 6  | 0.793 | -0.758 | 6  | 0.504        |
| <b>PR1a</b>  | 1.211  | 6  | 0.306        | -0.391 | 6  | 0.722 | -0.001 | 6  | 0.999        |

**Table S2.** Detailed results of the statistical ANOVA analysis for phytohormones and gene expression during the stress combination. **A)** ANOVA analysis for phytohormones. Drought and *T. evansi* treatments, and the experiment replica were considered as fixed factors. Data were log10(x) transformed. All factors' interactions were studied but only Drought\*T. evansi interaction is shown. **B)** ANOVA analysis for gene expression. Drought and *T. evansi* treatment were considered as fixed factors. Data were normalized with respect to their corresponding control within each replica. In bold the significant factors ( $p < 0.05$ ). Degrees of freedom —df, p value—p, and F-statistic value—F are indicated.

| <b>A)</b>    |           |        |      |                  |        |      |                   |        |      |              |         |      |              |
|--------------|-----------|--------|------|------------------|--------|------|-------------------|--------|------|--------------|---------|------|--------------|
|              | Drought   |        |      | <i>T. evansi</i> |        |      | Drought*T. evansi |        |      | Replica      |         |      |              |
|              | F         | df     | p    | F                | df     | p    | F                 | df     | p    | F            |         |      |              |
| <b>ABA</b>   | <b>1h</b> | 34.800 | 1,20 | <b>0.000</b>     | 2.167  | 1,20 | 0.157             | 1.704  | 1,20 | 0.207        | 378.242 | 1,20 | <b>0.000</b> |
|              | <b>3h</b> | 14.946 | 1,20 | <b>0.001</b>     | 0.282  | 1,20 | 0.601             | 0.514  | 1,20 | 0.482        | 114.391 | 1,20 | <b>0.000</b> |
|              | <b>8h</b> | 2.410  | 1,20 | 0.136            | 0.593  | 1,20 | 0.450             | 0.257  | 1,20 | 0.618        | 73.256  | 1,20 | <b>0.000</b> |
| <b>SA</b>    | <b>1h</b> | 0.389  | 1,20 | 0.540            | 0.084  | 1,20 | 0.774             | 1.039  | 1,20 | 0.320        | 15.494  | 1,20 | <b>0.001</b> |
|              | <b>3h</b> | 0.527  | 1,20 | 0.476            | 22.212 | 1,20 | <b>0.000</b>      | 15.585 | 1,20 | <b>0.001</b> | 1.238   | 1,20 | 0.279        |
|              | <b>8h</b> | 0.081  | 1,20 | 0.779            | 21.575 | 1,20 | <b>0.000</b>      | 0.000  | 1,20 | 0.983        | 13.586  | 1,20 | <b>0.001</b> |
| <b>JA</b>    | <b>1h</b> | 1.077  | 1,20 | 0.312            | 8.912  | 1,20 | <b>0.007</b>      | 0.642  | 1,20 | 0.432        | 89.280  | 1,20 | <b>0.000</b> |
|              | <b>3h</b> | 0.411  | 1,20 | 0.529            | 3.441  | 1,20 | 0.078             | 2.081  | 1,20 | 0.165        | 304.401 | 1,20 | <b>0.000</b> |
|              | <b>8h</b> | 0.124  | 1,20 | 0.728            | 1.177  | 1,20 | 0.291             | 0.794  | 1,20 | 0.384        | 119.745 | 1,20 | <b>0.000</b> |
| <b>B)</b>    |           |        |      |                  |        |      |                   |        |      |              |         |      |              |
|              | Drought   |        |      | <i>T. evansi</i> |        |      | Drought*T. evansi |        |      |              |         |      |              |
|              | F         | df     | p    | F                | df     | p    | F                 | df     | p    |              |         |      |              |
| <b>DREB2</b> | <b>1h</b> | 0.389  | 1,12 | 0.544            | 2.361  | 1,12 | 0.150             | 0.440  | 1,12 | 0.520        |         |      |              |
|              | <b>3h</b> | 0.513  | 1,12 | 0.487            | 0.158  | 1,12 | 0.698             | 0.541  | 1,12 | 0.476        |         |      |              |
|              | <b>8h</b> | 13.610 | 1,12 | <b>0.003</b>     | 0.638  | 1,12 | 0.440             | 14.068 | 1,12 | <b>0.003</b> |         |      |              |
| <b>RAB18</b> | <b>1h</b> | 21.483 | 1,12 | <b>0.001</b>     | 0.756  | 1,12 | 0.401             | 0.030  | 1,12 | 0.865        |         |      |              |
|              | <b>3h</b> | 41.789 | 1,12 | <b>0.000</b>     | 8.802  | 1,12 | <b>0.012</b>      | 3.072  | 1,12 | 0.105        |         |      |              |
|              | <b>8h</b> | 68.623 | 1,12 | <b>0.000</b>     | 41.531 | 1,12 | <b>0.000</b>      | 0.531  | 1,12 | 0.480        |         |      |              |
| <b>NCED1</b> | <b>1h</b> | 0.149  | 1,12 | 0.706            | 0.147  | 1,12 | 0.708             | 0.005  | 1,12 | 0.947        |         |      |              |
|              | <b>3h</b> | 5.296  | 1,12 | <b>0.040</b>     | 0.347  | 1,12 | 0.567             | 0.235  | 1,12 | 0.636        |         |      |              |
|              | <b>8h</b> | 0.191  | 1,12 | 0.670            | 1.578  | 1,12 | 0.233             | 0.811  | 1,12 | 0.386        |         |      |              |
| <b>AOC</b>   | <b>1h</b> | 0.639  | 1,12 | 0.439            | 0.180  | 1,12 | 0.679             | 0.119  | 1,12 | 0.736        |         |      |              |
|              | <b>3h</b> | 4.285  | 1,12 | 0.061            | 0.077  | 1,12 | 0.786             | 0.180  | 1,12 | 0.679        |         |      |              |
|              | <b>8h</b> | 28.501 | 1,12 | <b>0.000</b>     | 3.172  | 1,12 | 0.100             | 1.742  | 1,12 | 0.212        |         |      |              |
| <b>MYC2</b>  | <b>1h</b> | 0.036  | 1,12 | 0.853            | 0.001  | 1,12 | 0.978             | 0.832  | 1,12 | 0.380        |         |      |              |
|              | <b>3h</b> | 1.479  | 1,12 | 0.247            | 4.086  | 1,12 | 0.066             | 3.304  | 1,12 | 0.094        |         |      |              |
|              | <b>8h</b> | 0.210  | 1,12 | 0.655            | 0.646  | 1,12 | 0.437             | 1.492  | 1,12 | 0.245        |         |      |              |
| <b>JA2</b>   | <b>1h</b> | 0.635  | 1,12 | 0.441            | 0.343  | 1,12 | 0.569             | 0.154  | 1,12 | 0.702        |         |      |              |
|              | <b>3h</b> | 4.069  | 1,12 | 0.067            | 0.045  | 1,12 | 0.835             | 0.198  | 1,12 | 0.664        |         |      |              |
|              | <b>8h</b> | 32.578 | 1,12 | <b>0.000</b>     | 3.277  | 1,12 | 0.095             | 1.879  | 1,12 | 0.196        |         |      |              |
| <b>PR1a</b>  | <b>1h</b> | 0.001  | 1,12 | 0.976            | 0.012  | 1,12 | 0.913             | 0.001  | 1,12 | 0.974        |         |      |              |

|           |       |      |       |       |      |              |         |      |              |
|-----------|-------|------|-------|-------|------|--------------|---------|------|--------------|
| <b>3h</b> | 0.012 | 1,12 | 0.913 | 6.424 | 1,12 | <b>0.026</b> | 277.366 | 1,12 | <b>0.000</b> |
| <b>8h</b> | 1.395 | 1,12 | 0.260 | 0.725 | 1,12 | 0.411        | 0.713   | 1,12 | 0.415        |

**Table S3.** Annotation of mass chromatographic features in initial drought imposition (annotation level: 1, matched against authentic standard; 2, putative annotation by matching mass spectra with public libraries; 3, tentative annotation by partial matching of mass spectra with public libraries). Quantified ions are highlighted in bold. nd, not determined. Mass to charge ratio—mz and retention time in seconds—rt, are indicated.

| Annotation                                   | mz   | rt [s]   | ion type  | Annotation level |
|--|--|--|---|------------------|
| oleoylcarnitine glucoside                    | 588.390<br>142   | 965.0<br>66  | [M + H] + 587.382   | 2                |
| Benzyl O-[arabinofuranosyl-(1->6)-glucoside] | 426.333<br>544<br>86.0564<br>556<br>104.071<br>781   | 965.0<br>66<br>976.7<br>08<br>978.0<br>9   | [M + H - C6H10O5]<br>+ 587.382<br>[M + H - H2O] +<br>103.064<br>[M + H] + 103.064 |                  |
| Choline                                      | 403.164<br>47  | 578.9<br>025   | [M + H] + 402.156   | 2                |
| Phosphatidyl choline phospholipid #1         | 91.0554<br>303<br>109.029<br>845<br>115.040<br>556<br>133.058<br>687<br>253.110<br>004<br>295.104<br>284<br>420.187<br>394<br>425.145<br>315<br>441.117<br>763 | 578.4<br>88<br>578.4<br>82<br>578.4<br>81<br>578.4<br>8<br>578.4<br>87<br>578.4<br>81<br>578.4<br>88<br>578.4<br>88<br>578.4<br>81 |   |                  |
| Phosphatidyl choline phospholipid #2         | 104.108<br>154   | 482.6<br>835   | nd  | 2                |
| Phosphatidyl Serine phospholipid             | 97.0297<br>526   | 578.4<br>88  |   |                  |
| Linalool 3,7-oxide beta-primeveroside        | 696.545<br>366<br>184.07<br>335.269  | 59.60<br>9<br>59.60<br>9   | [M + H - H2O] +<br>713.548  | 3                |
|  | 696.545<br>771<br>351.254<br>658<br>262.279<br>3   | 174.8<br>61<br>175.9<br>512.298<br>174.6   | [M + H - H2O] +<br>713.548<br>[M + H - C6H10O5]<br>+ 512.298                      | 3                |
|  | 726.453<br>421   | 87.70<br>9   | [M + H] + 725.445   | 3                |
|  | 465.258<br>235<br>311.259<br>127<br>447.250<br>874   | 517.3<br>61  | [M + H] +   | 2                |

|   |                |              |                            |   |
|---|----------------|--------------|----------------------------|---|
| L-lyxo-phytosphingosine #1                | 318.301<br>664 | 91.96<br>3   | [M + H] + 317.294          | 2 |
|   | 274.275        | 91.95        | [M + H - C4H8] +           |   |
|   | 582            | 8            | 329.331                    |   |
|   | 123.404<br>008 | 90.88<br>6   | [M + H] + 122.396          |   |
| octanal                                   | 274.275<br>564 | 190.8<br>43  | nd                         |   |
| gingerol                                  | 323.222<br>828 | 194.3<br>07  | [M + H] +                  | 2 |
| fatty acid                                | 275.202<br>357 | 109.1<br>84  | [M + H] + 274.196          | 3 |
| Glutamine                                 | 147.077<br>667 | 1011.<br>27  | [M + H] +                  |   |
|   | 130.067        | 1011.<br>27  | [M - NH3] +                |   |
|   | 84.064         | 1011.<br>27  |                            |   |
| Diacylglycerol                            | 591.498<br>776 | 408.5<br>985 | [M + H] + 590.493          | 3 |
|   | 573.433        |              | [M - H2O] +                |   |
|   | 313.28         |              |                            |   |
| Betaine                                   | 118.087<br>852 | 698.2<br>08  | nd                         | 2 |
| feruloyl glucose                          | 374.145<br>347 | 648.6<br>44  | [M + H + NH3] +<br>356.115 | 2 |
|   | 379.106<br>336 | 648.0<br>22  | [M + Na] + 356.115         |   |
|   | 193.14         |              |                            |   |
| Isopentyl gentiobioside                   | 430.229<br>259 | 597.9<br>36  | [M + H + NH3] +<br>412.193 | 2 |
|   | 435.183<br>199 | 598.9<br>84  | [M + Na] + 412.193         |   |
|   | 451.154<br>387 | 597.9<br>35  | [M + K] + 412.193          |   |
| nicotinate beta-D-ribonucleotide          | 336.063<br>185 | 537.8<br>43  | [M + H] + 335.054          | 2 |
| lucuminic acid                            | 464.176<br>084 | 498.9<br>69  | [M + H + NH3] +<br>446.142 | 2 |
|   | 485.105<br>438 | 499.9<br>97  | [M + K] + 446.142          |   |
|   | 153.056<br>181 | 499.9<br>86  |                            |   |
| (S)-5'-Deoxy-5'-(methylsulfinyl)adenosine | 314.093<br>684 | 518.3<br>94  | nd                         | 2 |
|   | 136.065<br>949 | 518.3<br>96  | adenine moiety             |   |
| kaempferol hexoside deoxyhexoside         | 595.168<br>464 | 592.7<br>21  | nd                         | 1 |
|   | 287.057<br>074 | 592.7<br>22  |                            |   |
|   | 449.109<br>487 | 592.7<br>22  |                            |   |
| L-lyxo-phytosphingosine #2                | 318.299<br>626 | 186.6<br>8   | nd                         | 2 |
|   | 140.081<br>696 | 187.1<br>96  |                            |   |
| ornithine moiety                          | 133.101<br>825 | 142.5<br>01  | nd                         | 3 |
| alkaloid                                  | 476.285        | 622.3<br>75  | nd                         | 3 |
| guanine                                   | 152.059<br>342 | 584.0<br>42  | nd                         | 1 |

|  |                |              |                               |       |
|--|----------------|--------------|-------------------------------|-------|
| disaccharide   | 365.106<br>551 | 1046.<br>22  | [M + Na] + 342.118            | 2     |
|  | 162.077        | 1051.        |                               |       |
|  | 76             | 34           |                               |       |
| polymethoxylated flavone   | 361.091<br>262 | 661.5<br>015 | [M + H] + 360.085             | 3     |
| maltose  | 409.095<br>047 | 953.2<br>95  | [M - H + NaCOOH]<br>- 342.117 | 2     |
| pimpinellin  | 245.043<br>503 | 977.8<br>29  | [M - H] - 246.051             | 2     |
| 2-Dodecylbenzenesulfonic acid  | 325.185<br>14  | 73.33<br>35  | [M - H] - 326.192             | 2     |
|  | 68.9974        |              |                               |       |
|  | 1              |              |                               |       |
|  | 112.985        |              |                               |       |
|  | 972            |              |                               |       |
|  | 297.152        |              |                               |       |
|  | 415            |              |                               |       |
|  | 311.169        |              |                               |       |
|  | 795            |              |                               |       |
| pyroglutamic   | 128.036<br>542 | 1006.<br>08  | nd                            | 1     |
| benzamide  | 120.046<br>797 | 166.3<br>76  | [M - H] - 121.054             | 2     |
| cyanidin glucoside   | 447.093<br>937 | 358.0<br>09  | nd                            | 1     |
| O-alpha-Glucopyranosyl-(1-4)-O-alpha-xylopyranosyl-(1-4)-O-alpha-xylopyranosyl-(1-4)-glucopyranose | 605.193<br>3   | 1338.<br>74  | nd                            | 2     |
| purine   | 119.036<br>041 | 812.2<br>705 | nd                            | 3     |
| synapoyl glucose   | 385.114<br>155 | 206.2<br>26  | [M - H] - 386.122             | 2     |
|  | 205.051        | 206.2        | [M - H - H2O] -               |       |
|  | 4              | 39           | 224.071                       |       |
| (2S)-2-Butanol O-[b-D-Apiofuranosyl-(1->6)-b-D-glucopyranoside                                     | 367.159<br>858 | 600.1<br>02  | [M - H] - 368.167             | 2     |
|  | 235.117        | 599.0        | [M - H - C5H8O4] -            |       |
|  | 691            | 82           | 368.167                       |       |
| 7-Methoxy-2-methylisoflavone   | 265.094<br>83  | 880.0<br>07  | nd                            | 2     |
| Malondialdehyde  | 71.0161<br>559 | 704.6<br>405 | nd                            | 2     |
| Inositol cyclic phosphate  | 241.014<br>144 | 938.3<br>61  | nd                            | 2     |
| Unknown pentoside  | 229.109<br>01  | 631.3<br>76  | [M - H - C5H8O4]<br>- 362.159 | 3, nd |
| Uridine diphosphate-N-acetylglucosamine  | 606.075<br>026 | 1294.<br>19  | [M - H] - 607.082             | 2     |
| O-Caffeoylquinic acid #1   | 353.088<br>102 | 835.9<br>085 | nd                            | 2     |
| O-Caffeoylquinic acid #2   | 353.087<br>878 | 916.8<br>16  | nd                            | 2     |
| Succinic acid semialdehyde   | 101.025<br>621 | 817.8<br>38  | nd                            | 2     |
|  | 73.048         | 833.4        |                               |       |
| peroxynitrite/nitrate  | 61.9902<br>408 | 148.9<br>055 | nd                            | 3     |

**Table S4.** Annotation of significantly-altered mass chromatographic features in the experiments involving concurring spider mite infestation and drought (annotation level: 1, matched against authentic standard; 2, putative annotation by matching mass spectra with public libraries; 3, tentative annotation by partial matching of mass spectra with public libraries). Quantified ions are highlighted in bold. nd, not determined. Mass to charge ratio –mz and retention time in seconds—rt, are indicated.

| Annotation  | mz   | rt [s]   | ion type   | Annotation level |
|---|--|--|--|------------------|
| Glycerophosphocholine   | 258.111749<br>104.10798<br>184.074999  | 1028.59<br>1028.585<br>1028.585  | [M + H] + 257.104  | 2                |
| <b>Phosphatidyl ethanolamine (PE)</b>                                       | <b>770.59156</b><br>335.25977<br>563.46906<br>567.439617<br>585.45095<br>600.440986<br>613.482474<br>628.475041<br>742.54983<br>762.487567<br>764.533071 | <b>79.019</b><br>81.101<br>79.0395<br>80.0615<br>81.109<br>80.954<br>81.0035<br>80.961<br>79.0305<br>81.112<br>79.9185 | [M + H] + 769.579<br>[M + H – C2H4] + 590.495<br>[M + Na] + 544.451<br>[M + H – C2H4] + 627.466<br>[M + Na] + 590.495<br>[M + H] + 627.466<br>[M + H – C2H4] + 769.579 | 3                |
| <b>Anthranilic acid</b>   | <b>138.056529</b><br>92.0505177<br>94.0663011  | <b>751.491</b><br>751.91<br>751.6895   | [M + H] + 137.05<br>[M + H – HCOOH] + 137.05<br>[M + H – CO2] + 137.05   | 1                |
| <b>Diterpenoid glycoside</b>  | <b>515.321924</b><br>261.222667<br>335.259657<br>353.269484  | <b>155.484</b><br>155.4895<br>155.4895<br>155.4895   | [M + H] + 514.318<br>[M + H – C2H4] + 288.254<br>[M – H2O] + 352.2694<br>[M + H – C6H10O5] + 514.318   | 3                |
| <b>Linoleoyl glycerophosphocholine</b>                                      | <b>520.340134</b><br>502.324566  | <b>530.146</b><br>530.1465   | [M + H] + 519.333<br>[M + H – H2O] + 519.333   | 2                |
| <b>Octylamine #1</b>  | <b>130.160162</b>  | <b>66.5</b>  | nd   | 3                |
| L-proline   | 116.072152<br>70.0664826   | 797.242<br>797.538   | [M + H] +<br>[M + H – HCOOH] + 69.0593   | 1                |
| <b>Phosphatidylserine (PS)</b>  | <b>554.344171</b><br>534.319881  | <b>573.223</b><br>572.1815   |  | 2                |
| <b>Glucocerebroside-like</b>  | <b>714.552105</b><br>552.500286<br>696.546507  | <b>173.863</b><br>173.863<br>174.238   | [M + H] + 713.546<br>[M + H – C6H10O5] + 713.546<br>[M + H – H2O] + 713.546  | 3                |
| <b>Glycosylated steroid alkaloid tentative</b>                              | <b>594.403809</b><br>295.104998<br>428.351826<br>432.349114  | <b>958.885</b><br>958.204<br>960.2655<br>959.52  | [M + H] + 593.397<br>[M + H – C6H10O5] + 456.15<br>[M + H] + 427.343<br>[M + H – C6H10O5] + 593.397  | 3                |
| <b>Octylamine #2</b>  | <b>130.160446</b>  | <b>197.692</b>   | nd   | 3                |
| <b><math>\gamma</math>-Glutamyl-<math>\beta</math>-aminopropiononitrile</b> | <b>217.131869</b><br>158.08417<br>175.116193   | <b>979.5795</b><br>979.5795<br>979.1165  | [M + H+NH3] + 199.095<br>[M + H – COCH2] + 199.095   | 2                |
| <b>Phosphatidyl glycerol (PG)</b>   | <b>743.47648</b><br>489.356499<br>563.408467<br>581.421819   | <b>94.7655</b><br>95.177<br>94.7665<br>94.7655   | [M + H] + 742.469<br>[M + H – H2O] + 580.415<br>[M + H – C6H10O5] + 742.469  | 2                |
| <b>Diacylglycerol #1</b>  | <b>609.454387</b><br>123.056443<br>191.144259<br>318.301504<br>495.404728<br>517.38243<br>597.415776   | <b>90.8165</b><br>90.8435<br>90.97<br>91.8775<br>90.815<br>91.8615<br>90.8385  | [M + H] + 608.444<br>[M + K] + 84.0949<br>[M + H] + 494.396<br>[M + Na] + 494.396<br>[M + H – C4H8] + 652.48   | 2                |
| <b>Unknown guanosine derivative</b>   | <b>312.130152</b><br>180.089289  | <b>442.952</b><br>441.906  | [M + H] + 311.123<br>[M + H – C5H8O4] + 311.123  | 3                |
| <b>Glycosyl oleosyl tyrosine tentative</b>                                  | <b>608.380073</b><br>446.327061  | <b>1066.395</b><br>1066.385  | [M + H] + 607.373<br>[M + H – C6H10O5] + 607.373   | 3                |
| <b>L-Glutamate</b>  | <b>148.062283</b><br>102.056211  | <b>1144.895</b><br>1144.9  | [M + H]+ 147.054<br>[M + H – HCOOH] + 147.054  | 1                |

|                                      |                   |                 |                            |             |
|--------------------------------------|-------------------|-----------------|----------------------------|-------------|
|                                      | 130.05145         | 1143.875        | [M + H - H2O] + 147.054    |             |
| Trp/anthranilate-derived alkaloid #1 | <b>160.077523</b> | <b>525.4205</b> | nd                         | <b>3</b>    |
| Adenine                              | <b>136.065707</b> | <b>260.995</b>  | nd                         | <b>1</b>    |
| Diacylglycerol #2                    | <b>591.498873</b> | <b>407.5545</b> | [M + H] + 590.493          | <b>3</b>    |
|                                      | 97.1001582        | 407.504         |                            |             |
|                                      | 102.890466        | 406.16          |                            |             |
|                                      | 107.381363        | 405.093         |                            |             |
| Unknown oxylipin                     | <b>211.170449</b> | <b>623.9395</b> | [M + H] + 210.165          | <b>3</b>    |
|                                      | 174.142194        | 623.9545        |                            |             |
|                                      | 193.160743        | 622.9025        | [M + H - H2O] + 210.165    |             |
| Phosphocholine                       | <b>184.075279</b> | <b>532.2415</b> | nd                         | <b>2</b>    |
| Kaempferol                           | <b>287.057627</b> | <b>348.149</b>  | nd                         | <b>1, 3</b> |
| Trehalose                            | <b>343.124978</b> | <b>1232.34</b>  | [M + H] + 342.117          | <b>2</b>    |
| L-Aspartate                          | <b>134.045489</b> | <b>1264.115</b> | nd                         | <b>1</b>    |
| Unknown lignan #1                    | <b>415.214999</b> | <b>53.372</b>   | [M + H] + 414.211          | <b>3</b>    |
| Trp/anthranilate-derived alkaloid #2 | <b>160.077541</b> | <b>564.5435</b> | nd                         | <b>3</b>    |
| L-Tyrosine                           | <b>182.083331</b> | <b>728.615</b>  | nd                         | <b>1</b>    |
| Methyl-propenyl-ketone fragment      | <b>85.0595623</b> | <b>65.906</b>   | nd                         | <b>3</b>    |
| L-Citrulline                         | <b>176.103539</b> | <b>1066.4</b>   | [M + H] + 175.097          | <b>2</b>    |
|                                      | 159.07823         | 1067.43         | [M + H - NH3] + 175.097    |             |
| 2-O-methyladenosine                  | <b>282.121178</b> | <b>772.818</b>  | [M + H] + 281.114          | <b>2</b>    |
|                                      | 150.079173        | 772.818         | [M + H - C5H8O4] + 281.114 |             |
| Betalamic acid                       | <b>210.040691</b> | <b>72.512</b>   | [M - H] - 211.048          | <b>2</b>    |
|                                      | 166.051461        |                 | [M - H - CO2] - 211.048    |             |
|                                      | 122.061824        |                 | [M - H - CO2] - 167.059    |             |
|                                      | 112.986128        |                 | [M - H] - 113.994          |             |
|                                      | 104.051649        |                 | [M - H - H2O] - 123.07     |             |
|                                      | 68.9973087        |                 | [M - H - CO2] - 113.994    |             |
| Unknown lignan #2                    | <b>415.144229</b> | <b>595.9305</b> | [M - H] - 416.153          | <b>3</b>    |
|                                      | 397.134394        |                 | [M - H - H2O] - 416.153    |             |
| Heptaprenyl diphosphate tentative    | <b>675.359228</b> | <b>595.9265</b> | [M - H + Na] -             | <b>3</b>    |
|                                      | 653.375205        |                 | [M - H] -                  |             |
|                                      | 277.21            |                 |                            |             |
|                                      | 101.029           |                 |                            |             |
| N-Methylantranilate                  | <b>150.056863</b> | <b>189.953</b>  | nd                         | <b>2</b>    |
| Malic acid                           | <b>89.0257836</b> | <b>664.706</b>  | nd                         | <b>1</b>    |
| UDP glucose tentative                | <b>565.047354</b> | <b>1328.19</b>  | [M - H] - 566.053          | <b>2</b>    |
| Monodiacylglycerol                   | <b>775.536748</b> | <b>176.006</b>  | [M + Na + ACN] -           | <b>3</b>    |
|                                      | 712.537           |                 | [M - H] -                  |             |
|                                      | 683.3995          |                 |                            |             |
|                                      | 661.419           |                 |                            |             |
|                                      | 550.4766          |                 | [M - Hexose] -             |             |
|                                      | 532.4626          |                 | [M-glucose] -              |             |
| Unknown Carboxylic acid              | <b>310.073376</b> | <b>639.003</b>  | [M - H] -                  | <b>3</b>    |
|                                      | 266.083214        |                 | [M - H - CO2] - 311.081    |             |
| Methanesulfonic acid                 | <b>94.9826702</b> | <b>401.101</b>  | nd                         | <b>2</b>    |
| L-Erythrulose                        | <b>119.036098</b> | <b>704.597</b>  | [M - H] -                  | <b>2</b>    |
|                                      | 101.025423        |                 | [M - H - H2O] -            |             |
|                                      | 71.0160475        |                 |                            |             |
|                                      | 59.0163848        |                 |                            |             |
| Glyceric acid                        | <b>105.020724</b> | <b>879.954</b>  | nd                         | <b>2</b>    |
|                                      | 75.03             |                 |                            |             |

**Table S5.** Nucleotide sequence of primers used for qRT-PCR analysis.

| Gene         | Name  | Gene Model             | Forward Primer (5'→3')       | Reverse Primer (5'→3')          | Reference  |
|--------------|---|------------------------|------------------------------|---------------------------------|--|
| <i>DREB2</i> | Dehydration<br>-responsive<br>element-<br>binding<br>protein 2<br>(DREB2) | Solyc05g05241<br>0.1.1 | GCAAGAGGACTTCCACTT<br>CT     | GCCATGTTGCCAATGCACC<br>AA       | [37]   |
| <i>RAB18</i> | Responsive<br>to ABA 18   | Solyc02g08485<br>0.2.1 | CCTGGGATGCATTGAACA<br>CC     | CACGGGACACCATAACACA<br>C        | [38]   |
| <i>NCED1</i> | 9-cis-<br>epoxycarote<br>noid<br>dioxygenase<br>1 (NCED1)                 | Solyc07g05657<br>0.1.1 | CTTATTTGGCTATCGCTGA<br>ACC   | CCTCCAACTTCAAACTCATT<br>GC      | [46]   |
| <i>AOC</i>   | Allene oxide<br>cyclase   | Solyc02g08573<br>0.2.1 | GCCTCTGCTGCTCTTAGA<br>ACC    | CGAAGATAAGCAGGGCTTC<br>C        | [46]   |
| <i>JAZ2</i>  | Jasmonic<br>acid 2  | Solyc12g01362<br>0.1.1 | GCCCATCCTCCAAATTTC<br>CG     | CTACTGCTGAACCCGAGAT<br>T        | [40]   |
| <i>PR-1a</i> | Pathogenesis<br>-related<br>protein 1a                                    | Solyc09g00701<br>0.1.1 | TGGTGGTTCATTTCTTGCA<br>ACTAC | ATCAATCCGATCCACTTATC<br>ATTITTA | [22]   |
| <i>MYC2</i>  | MYC2  | Solyc08g07693<br>0.1.1 | CGGTGTCATCACCTGCTT<br>AT     | TTCGGTGTGGTAACTTCTT<br>C        | [21]   |
| <i>Actin</i> | Actin   | Solyc03g07840<br>0.2.1 | CCTCAGCACATTCCAGCA<br>G      | CCACCAAACCTCTCCATCCC            | Isabel<br>Diaz<br>unpublished<br>results<br>(CBGP,<br>Madrid<br>Spain) |
| <i>EF1a</i>  | Elongation<br>factor 1-<br>alpha  | Solyc06g00997<br>0.2.1 | GACAGGGCGTTCAGGTAA<br>GGA    | GGGTATTCAAGCAAAGGTCT<br>C       | [38]   |