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| Table S1. General Linear Models (LM) or Generalized Linear Models (GLM) results for germination, stem length and radicle length of *Lactuca sativa* in response to application of the commercial formulation of methyl cinnamate and methyl anisate. | | | | | | | | | | | | | | |
| Molecule | Variable | Model | Error  family | Link  function | Df | Sum  Sq | Mean  Sq | *F* | *Pr*(>*F*) | Deviance | Resid.  Df | Resid.  Deviance | LRT | *Pr*(>*Chi*) |
| Methyl cinnamate | Germination | GLM | binomial | cloglog | 5 |  |  |  |  | 212.81 |  |  | 6.18 | 0.289 |
|  | Stem length | GLM | gaussian | log | 5 |  |  |  |  | 1.17 | 30 | 0.05 |  | **< 0.001** |
|  | Radicle length | GLM | gaussian | log | 5 |  |  |  |  | 29.31 | 30 | 0.71 |  | **< 0.001** |
| Methyl anisate | Germination | GLM | binomial | cloglog | 5 |  |  |  |  | 136.87 |  |  | 4.74 | 0.449 |
|  | Stem length | LM | gaussian | identity | 5 | 0.09 | 0.02 | 21.01 | **< 0.001** |  |  |  |  |  |
|  | Radicle length | GLM | gamma | identity | 5 |  |  |  |  | 2.31 | 30 | 0.28 |  | **< 0.001** |
| Df: degrees of freedom; Sum Sq: sum of squares; Mean Sq: mean square; Resid Df: residual degrees of freedom; Resid Deviance: residual deviance. Values in bold indicate significance at *P* ≤ 0.05 level. | | | | | | | | | | | | | | |

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| Table S2. General Linear Models (LM) or Generalized Linear Models (GLM) results for germination, stem length and radicle length of *Lactuca sativa*, *Lolium rigidum* and *Triticum aestivum* seedlingsin response to application of the commercial formulation of methyl cinnamate. | | | | | | | | | | | | | | |
| Species | Variable | Model | Error  family | Link  function | Df | Sum  Sq | Mean  Sq | *F* | *Pr*(>*F*) | Deviance | Resid.  Df | Resid.  Deviance | LRT | *Pr*(>*Chi*) |
| *Lactuca sativa* | Germination | GLM | binomial | cloglog | 8 |  |  |  |  | 521.61 |  |  | 61.43 | **< 0.001** |
|  | Stem length | LM | gaussian | identity | 8 | 1.05 | 0.13 | 29.19 | **< 0.001** |  |  |  |  |  |
|  | Radicle length | GLM | gaussian | log | 8 |  |  |  |  | 111.72 | 45 | 5.50 |  | **< 0.001** |
| *Lolium rigidum* | Germination | GLM | binomial | cloglog | 8 |  |  |  |  | 916.27 |  |  | 98.71 | **< 0.001** |
|  | Stem length | LM | gamma | inverse | 7 |  |  |  |  | 7.63 | 40 | 2.25 |  | **< 0.001** |
|  | Radicle length | GLM | gamma | inverse | 7 |  |  |  |  | 14.01 | 40 | 3.37 |  | **< 0.001** |
| *Triticum aestivum* | Germination | GLM | binomial | cloglog | 8 |  |  |  |  | 622.44 |  |  | 14.89 | 0.061 |
|  | Stem length | GLM | gaussian | log | 8 |  |  |  |  | 278.57 | 43 | 194.05 |  | **< 0.001** |
|  | Radicle length | LM | gaussian | identity | 8 | 126.92 | 15.86 | 7.04 | **< 0.001** |  |  |  |  |  |
| Df: degrees of freedom; Sum Sq: sum of squares; Mean Sq: mean square; Resid Df: residual degrees of freedom; Resid Deviance: residual deviance. Values in bold indicate significance at *P* ≤ 0.05 level. | | | | | | | | | | | | | | |

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| Table S3. General Linear Models (LM), Generalized Linear Models (GLM) or Kruskal-Wallis test results for protein concentration, α-amylase activity and guaiacol peroxidase activity (GPX) in germinating seeds of *Lactuca sativa*, *Lolium rigidum* and *Triticum aestivum* in response to application of the commercial formulation of. | | | | | | | | | | | | | | | |
| Species | Variable | Model | Error  family | Link  function | Df | Sum  Sq | Mean  Sq | *F* | *Pr*(>*F*) | Deviance | Resid.  Df | Resid.  Deviance | *Pr*(>*Chi*) | χ² | *P* |
| *Lactuca sativa* | Total proteins | LM | gaussian | identity | 4 | 0.362 | 0.090 | 9.50 | **< 0.001** |  |  |  |  |  |  |
|  | α-Amilase activity | LM | gaussian | identity | 4 | 1.15E-06 | 2.88E-07 | 15.19 | **< 0.001** |  |  |  |  |  |  |
|  | GPX | GLM | quasi | identity | 4 |  |  |  |  | 1.00E-04 | 20 | 1.52E-05 | **< 0.001** |  |  |
| *Lolium rigidum* | Total proteins | GLM | inverse.gaussian | identity | 4 |  |  |  |  | 1.41 | 20 | 4.547 | 0.142 |  |  |
|  | α-Amylase activity | KW |  |  | 4 |  |  |  |  |  |  |  |  | 5.12 | 0.276 |
|  | GPX | LM | gaussian | identity | 4 | 1.86E-05 | 4.65E-06 | 10.20 | **< 0.001** |  |  |  |  |  |  |
| *Triticum aestivum* | Total proteins | GLM | inverse.gaussian | identity | 4 |  |  |  |  | 0.02 | 20 | 0.062 | 0.330 |  |  |
|  | α-Amilase activity | LM | gaussian | identity | 4 | 9.02E-08 | 2.26E-08 | 3.37 | **0.029** |  |  |  |  |  |  |
|  | GPX | LM | gaussian | identity | 4 | 1.54E-07 | 3.85E-08 | 2.70 | 0.060 |  |  |  |  |  |  |
| Df: degrees of freedom; Sum Sq: sum of squares; Mean Sq: mean square; Resid Df: residual degrees of freedom; Resid Deviance: residual deviance. Values in bold indicate significance at *P* ≤ 0.05 level. | | | | | | | | | | | | | | | |

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| Table S4. General Linear Models (LM), Generalized Linear Models (GLM) or Kruskal-Wallis test results for initial stem length (ISL), stem increment (ST), stem biomass (SB), foliar area (FA), proteins and malondialdehyde content (MDA) in stems and on root length (RL), root biomass (RB), proteins, triphenyltetrazolium chloride (TTC) and superoxide dismutase activity (SOD) in roots of well-established *Lactuca sativa*, *Lolium rigidum* and *Triticum aestivum* plants in response to application of the commercial formulation of methyl cinnamate. | | | | | | | | | | | | | | | | |
| Species | Plant part | Variable | Analysis | Error  family | Link  function | Df | Sum  Sq | Mean  Sq | *F* | *Pr*(>*F*) | Deviance | Resid.  Df | Resid.  Deviance | *Pr*(>*Chi*) | χ² | *P* |
| *Lactuca sativa* | Stem | ISL | LM | gaussian | identity | 4 | 1.634 | 0.409 | 2.39 | 0.065 |  |  |  |  |  |  |
|  |  | SI | KW |  |  | 4 |  |  |  |  |  |  |  |  | 39.55 | **< 0.001** |
|  |  | SB | LM | gaussian | identity | 4 | 0.001 | 2.82 E-04 | 3.92 | **0.017** |  |  |  |  |  |  |
|  |  | FA | GLM | gaussian | log | 4 |  |  |  |  | 1936.2 | 20 | 449.2 | **< 0.001** |  |  |
|  |  | Proteins | GLM | gaussian | log | 4 |  |  |  |  | 0.182 | 20 | 0.915 | 0.408 |  |  |
|  |  | MDA | KW |  |  | 4 |  |  |  |  |  |  |  |  | 10.24 | **0.037** |
|  | Root | RL | GLM | gaussian | log | 4 |  |  |  |  | 30.118 | 20 | 37.356 | **0.003** |  |  |
|  |  | RB | LM | gaussian | identity | 4 | 1.68E-05 | 4.21E-06 | 4.56 | **0.009** |  |  |  |  |  |  |
|  |  | Proteins | LM | gaussian | identity | 4 | 2.400 | 0.600 | 3.77 | **0.019** |  |  |  |  |  |  |
|  |  | TTC | GLM | gaussian | log | 4 |  |  |  |  | 20.875 | 20 | 2.495 | **< 0.001** |  |  |
|  |  | SOD | GLM | quasi | identity | 4 |  |  |  |  | 0.003 | 20 | 0.004 | **0.011** |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Lolium rigidum* | Stem | ISL | LM | gaussian | identity | 4 | 12.777 | 3.194 | 2.25 | 0.070 |  |  |  |  |  |  |
|  |  | SI | LM | gaussian | identity | 4 | 77.85 | 19.462 | 3.74 | **0.007** |  |  |  |  |  |  |
|  |  | SB | LM | gaussian | identity | 4 | 6.92E-04 | 1.73E-04 | 1.29 | 0.309 |  |  |  |  |  |  |
|  |  | FA | GLM | inverse.gaussian | 1/mu^2 | 4 |  |  |  |  | 0.373 | 45 | 9.070 | 0.649 |  |  |
|  |  | Proteins | LM | gaussian | identity | 4 | 0.621 | 0.155 | 3.68 | **0.021** |  |  |  |  |  |  |
|  |  | MDA | GLM | inverse.gaussian | identity | 4 |  |  |  |  | 0.024 | 20 | 0.051 | 0.070 |  |  |
|  | Root | RL | LM | gaussian | identity | 4 | 7.624 | 1.906 | 1.37 | 0.259 |  |  |  |  |  |  |
|  |  | RB | LM | gaussian | identity | 4 | 2.46E-05 | 6.15E-06 | 1.46 | 0.253 |  |  |  |  |  |  |
|  |  | Proteins | LM | gaussian | identiy | 4 | 1.088 | 0.272 | 6.06 | **0.002** |  |  |  |  |  |  |
|  |  | TTC | KW |  |  | 4 |  |  |  |  |  |  |  |  | 14.86 | **0.005** |
|  |  | SOD | KW |  |  | 4 |  |  |  |  |  |  |  |  | 10.99 | **0.027** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Triticum aestivum* | Stem | ISL | KW |  |  | 4 |  |  |  |  |  |  |  |  | 7.98 | 0.092 |
|  |  | SI | GLM | inverse.gaussian | identity | 4 |  |  |  |  | 0.249 | 43 | 0.354 | **< 0.001** |  |  |
|  |  | SB | LM | gaussian | identity | 4 | 0.001 | 3.40E-04 | 0.18 | 0.944 |  |  |  |  |  |  |
|  |  | FA | GLM | inverse.gaussian | identity | 4 |  |  |  |  | 0.031 | 20 | 0.077 | **0.049** |  |  |
|  |  | Proteins | LM | gaussian | identity | 4 | 30.296 | 7.574 | 2.62 | 0.064 |  |  |  |  |  |  |
|  |  | MDA | GLM | gaussian | log | 4 |  |  |  |  | 3804.2 | 20 | 13326 | 0.222 |  |  |
|  | Root | RL | LM | gaussian | identity | 4 | 97.84 | 24.46 | 0.50 | 0.738 |  |  |  |  |  |  |
|  |  | RB | LM | gaussian | identity | 4 | 1.04E-04 | 2.61E-05 | 0.32 | 0.862 |  |  |  |  |  |  |
|  |  | Proteins | GLM | gaussian | log | 4 |  |  |  |  | 2.921 | 20 | 6.282 | 0.054 |  |  |
|  |  | TTC | LM | gaussian | identity | 4 | 17.776 | 4.444 | 0.62 | 0.655 |  |  |  |  |  |  |
|  |  | SOD | LM | gaussian | identity | 4 | 0.004 | 0.001 | 9.27 | **< 0.001** |  |  |  |  |  |  |
| Df: degrees of freedom; Sum Sq: sum of squares; Mean Sq: mean square; Resid Df: residual degrees of freedom; Resid Deviance: residual deviance. Values in bold indicate significance at *P* ≤ 0.05 level. | | | | | | | | | | | | | | | | |