**Models Summary**

M1. Fixed-effect model of lesion size variation

Y = I + D/P + I:D + I:D/P + EF/B + EF:I + EF:D + EF:D/P

M2. Mixed-effect model of lesion size variation

Y = I + D/P + I:D + I:D/P + ER + ER:I + ER:D

**M3.** Mixed-effect model of lesion size within plant accessions (lsmeans)

Y = I + WR/L/A + ER + ER:I

**M4.** Fixed-effect model of lesion size for individual isolates

Y = I + D/P + EF

**M5.** Mixed-effect model of lesion size for individual isolates

Y = I + D/P + ER

M6. Mixed-effect model for permutation (Celine)

Y = I + D/P + I\*D + I:D/P + ER + ER/B + ER/T

Fixed-effect model of lesion size variation

Y = I + D/P + I:D + I:D/P + EF/B + EF:I + EF:D + EF:D/P

Mixed-effect model of lesion size variation

Y = I + D/P + I:D + I:D/P + WR/L/A + ER + ER:I

Mixed-effect model of lesion size within plant accessions (lsmeans)

Y = I + WR/L/A + ER + ER:I

Fixed-effect model of lesion size for individual isolates

Y = I + D/P + EF

Mixed-effect model of lesion size for individual isolates

Y = I + D/P + ER

Mixed-effect model to test domestication effect under permutation

Y = I + D/P + I\*D + I:D/P + ER + ER/B + ER/T

Where I represents the fungal genotype (isolate), P represents plant genotype (accession), D represents domestication status, E represents the effect of experiment, B represents the effect of blocking. W represents whole plant, L represents leaf, A represents leaflet position, T represents growth tray. The subscripts (R, F) designate whether a term was included as a random or fixed effect in each model.

**Table 1. ANOVA results of the interaction between 12 tomato accessions and 95 *B. cinerea* isolates measured as lesion area.**

1a. The type III sums-of-squares, F-value, degrees of freedom and p-value for the linear modelling of lesion area for 12 tomato accessions by 95 *B. cinerea* isolates is shown. Two of our 97 isolates did not have replication across 2 experiments, so they were dropped at this stage of analysis. The terms are as follows; Isolate is the 95 *B. cinerea* isolates, Domestication is wild tomato, *S. pimpinellifolium*, versus domesticated tomato, *S. lycopersicum*, Plant is 12 tomato genotypes nested within their respective domestication groupings, Experiment tests the 2 independent replicate experiments, Experiment/Block tests the three blocks nested within each experiment. In addition, interactions of these factors are tested (:). We also estimated the broad-sense heritability (H2) for *B. cinerea*, tomato genotype, and their interaction.

1b. For all terms, the test statistic, degrees of freedom, and p-value for the general linear model of lesion area for 12 tomato accessions by 95 *B. cinerea* isolates is shown. For fixed effects, the Chi-squared value is shown, and for random effects the likelihood ratio test statistic is shown. The terms are as in the fixed effect model (Table 1a).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1a. Fixed Effect** | % total variance | % genetic variance | H2 | SS | F value | DF | p |
| Isolate | 10.2 | 45.8 | 0.10 | 256.6 | 13.5 | 94 | **<2e-16** |
| Domestication | 0.8 | 3.5 |  | 19.5 | 96.5 | 1 | **<2e-16** |
| Domest/Plant | 2.9 | 13.2 | 0.03 | 73.7 | 36.5 | 10 | **<2e-16** |
| Iso:Domest | 0.8 | 3.7 |  | 20.7 | 11 | 94 | 0.260 |
| Iso:Domest/Plant | 7.5 | 33.8 | 0.08 | 189.5 | 1.0 | 940 | 0.623 |
| Experiment | 21.7 |  |  | 545.7 | 2707 | 1 | **<2e-16** |
| Exp/Block | 8.0 |  |  | 201.0 | 249.3 | 4 | **<2e-16** |
| Exp:Iso | 6.0 |  |  | 152.2 | 8.0 | 94 | **<2e-16** |
| Exp:Domest | 0.03 |  |  | 0.8 | 4.1 | 1 | 0.043 |
| Exp:Domest/Plant | 1.9 |  |  | 47.4 | 23.5 | 10 | **<2e-16** |
| Residuals | 40.1 |  |  | 1009 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **1b. Fixed Effect** | X2 | DF | p |
| Isolate | 160.7 | 94 | **2e-05** |
| Domestication | 24.4 | 1 | **8e-07** |
| Domest/Plant | 294.6 | 10 | **<2e-16** |
| Iso:Domest | 81.2 | 94 | 0.82 |
| Iso:Domest/Plant | 756.6 | 940 | 1 |
| **Random Effect** | LRT | DF | p |
| 1 | Experiment | 5.1 | 1 | **0.02** |
| 1 | Exp:Iso | 312.1 | 1 | **<2e-16** |
| 1 | Exp:Domest | 1.1 | 1 | 0.3 |

**Table 2. Rank order shifts of 97 *B. cinerea* isolates by lesion area across all of the tomato accessions.**

Wilcoxon signed-rank test comparing mean *B. cinerea* lesion area on tomato accessions. This tests for a change in the rank order of the 97 isolates between each pair of tomato accessions. A significant p-value suggests that the relative performance of individual isolates is altered from one host to the other. The lower left corner of the chart includes B-H FDR-corrected p-values, the upper right corner includes the test statistic (W). Bold text indicates significance at p < 0.01 after correction, italicized text indicates suggestive p-values 0.01 < p < 0.1. NS shows non-significant interactions.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Wild | | | | | | Domesticated | | | | | | |
| LA1547 | LA1589 | LA1684 | LA2093 | LA2176 | LA480 | LA2706 | LA3008 | LA3475 | LA410 | LA4345 | LA4355 | |
| Wild | LA1547 |  | 2978 | 3988 | 2927 | 1865 | 3008 | 1710 | 3460 | 1597 | 1135 | 3928 | 2944 |
| LA1589 | **<0.001** |  | 5401 | 4699 | 3359 | 4662 | 3014 | 4918 | 2938 | 2340 | 5536 | 4454 |
| LA1684 | NS | *0.029* |  | 3709 | 2552 | 3690 | 2296 | 4004 | 2205 | 1690 | 4537 | 3571 |
| LA2093 | **<0.001** | NS | *0.049* |  | 3013 | 4496 | 2732 | 4889 | 2588 | 1947 | 5534 | 4264 |
| LA2176 | **<0.001** | **0.004** | **<0.001** | **<0.001** |  | 5837 | 4029 | 6002 | 3963 | 3276 | 6706 | 5583 |
| LA480 | **<0.001** | NS | *0.044* | NS | **0.001** |  | 6143 | 4192 | 6286 | 6855 | 3575 | 4702 |
| Domesticated | LA2706 | **<0.001** | **<0.001** | **<0.001** | **<0.001** | NS | **<0.001** |  | 6311 | 4523 | 3876 | 6917 | 5940 |
| LA3008 | **0.009** | NS | NS | NS | **<0.001** | NS | **<0.001** |  | 2619 | 2082 | 5100 | 4049 |
| LA3475 | **<0.001** | **<0.001** | **<0.001** | **<0.001** | NS | **<0.001** | NS | **<0.001** |  | 3815 | 7088 | 5984 |
| LA410 | **<0.001** | **<0.001** | **<0.001** | **<0.001** | **0.002** | **<0.001** | NS | **<0.001** | NS |  | 7567 | 6602 |
| LA4345 | *0.16* | *0.011* | NS | *0.011* | **<0.001** | *0.021* | **<0.001** | NS | **<0.001** | **<0.001** |  | 3439 |
| LA4355 | **<0.001** | **NS** | *0.02* | **NS** | **0.008** | **NS** | **<0.001** | **NS** | **<0.001** | **<0.001** | **<0.001** |  |

Supplemental Data Set 1. Mean of *B. cinerea* lesion size of all isolates across all tomato accessions.

Supplemental Data Set 2. Gene and Function Annotation from T4 GWA Results

Supplemental Data Set 3. Results of single-isolate ANOVA on fixed effect model

Supplemental Data Set 4. Results of single-isolate ANOVA on mixed effect model

Supplemental Data Set 5. Results of ANOVA following removal of domestication-associated isolates