**Supplementary data: Detached leaf assays**

**Supplementary Table S1.** Results obtained using the Leaf Doctor application for determination of percentage diseased leaf area.

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| **Detached Leaf Assay Results** |
|  |  | 20°C Rep 1 | 20°C Rep 2 | 20°C Rep 3 | 25°C Rep 1 | 25°C Rep 2 | 25°C Rep 3 |
|  |  | Moisture | No moisture | Moisture | No moisture | Moisture | No moisture | Moisture | No moisture | Moisture | No moisture | Moisture | No moisture |
| **Percentage diseased leaf area** | LS 6240 R | 18.22 | 49.9 | 21.5 | 34.41 | 16.02 | 6.27 | 64.53 | 18.53 | 0.23 | 4.76 | 66.83 | 41.87 |
| LS 6444 R | 26.56 | 43.42 | 36.79 | 34.38 | 38.41 | 14.3 | 58.49 | 43.04 | 0.38 | 8.84 | 66.22 | 65.72 |
| PAN 1454 R | 38.12 | 36.09 | 40.84 | 28.38 | 7.2 | 15.84 | 21.07 | 42.31 | 2.68 | 3.84 | 93.14 | 33.85 |
| LS 6146 R | 20.83 | 26.94 | 18.57 | 51.34 | 11.2 | 5.19 | 34.1 | 23.91 | 1.68 | 2.67 | 16.48 | 38.9 |
| PHB 94 Y 80 R | 38 | 24.62 | 12.44 | 54.66 | 3.26 | 5.63 | 44.3 | 61.43 | 2.63 | 3.79 | 29.69 | 56.22 |
| LS 6248 R | 20.26 | 32.24 | 27.87 | 22.01 | 2.78 | 5.94 | 21.55 | 26.62 | 4.04 | 3.09 | 24.47 | 53.76 |
| NS 5009 R | 18.89 | 30.91 | 38.36 | 15.61 | 10.28 | 19.53 | 30.97 | 38.56 | 0.73 | 1.72 | 30.07 | 56.51 |
| DM 5.1i RR | 18.18 | 19.43 | 21.07 | 23.5 | 5.35 | 10.5 | 23.5 | 9.59 | 2.28 | 1.32 | 26.43 | 52.17 |
| PHB 95 Y 20 R | 17.79 | 24.49 | 17.5 | 28.7 | 2.46 | 4.21 | 24.22 | 32.37 | 0.01 | 0.52 | 22.74 | 34.96 |
| PAN 1583 R | 35.4 | 22.97 | 4.03 | 14.87 | 2.6 | 13.37 | 23.33 | 27 | 2.11 | 0.32 | 37.83 | 5.7 |
| PAN 1664 R | 33.71 | 23.11 | 34.13 | 16.62 | Missing | 2.83 | 11.72 | 37.26 | 3.38 | 11.64 | 16.9 | 24.78 |
| DM 5953 RSF | 25.39 | 50.1 | 17.3 | 19.8 | 23.67 | 2.47 | 45.15 | 47.04 | 1.09 | 6.22 | 48.75 | 40.88 |
| LS 6453 R | 35.5 | 37.41 | 12.49 | 41.4 | 6.69 | 5.13 | 51.76 | 38.28 | 0.06 | 11.94 | 48.85 | 48.45 |
| PAN 1521 R | 43.73 | 30.51 | 27.45 | 27.09 | 1.67 | 3.05 | 23.24 | 46.32 | 5.02 | 3.03 | 50.35 | 40.56 |
| PAN 1500 R | 24.41 | 31.2 | 20.26 | 32.52 | 1.32 | 4.61 | 51.83 | 40.15 | 0.88 | 2.61 | 13.86 | 44.86 |
| NS 5909 R | 29.03 | 47.85 | 28.94 | 20.5 | 5.03 | 5.14 | 27.83 | 31.59 | 0.42 | 4.15 | 16.34 | 17.78 |
| PAN 1513 R | 25.42 | 24.53 | 27.99 | 53.13 | 11.98 | 3.24 | 44.04 | 28.33 | 2.05 | 5.33 | 10.98 | 23.25 |
| LS 6466 R | 36.13 | 24.4 | 23.34 | 25.64 | 7.28 | 7.77 | 23.92 | 19.13 | 1.82 | 1.41 | 12.07 | 17.91 |
| PAN 1666 R | 21.4 | 27.46 | 20.1 | 31.62 | 3.31 | 3.4 | 33.81 | 44.16 | 0.89 | 0.99 | 39.36 | 15.92 |
| PAN 1623 R | 44.39 | 34.69 | 2.72 | 19.46 | 11.22 | 17.1 | 43.04 | 36.83 | 0.75 | 1.72 | 29.17 | 13.09 |
| LS 6261 R | 25.01 | 37.61 | 21.38 | 22.94 | 1.89 | 2.15 | 23.27 | 49.75 | 0.9 | 4.39 | 15.82 | 18.73 |
| DM 6.2i RR | 27.01 | 43.2 | 30.06 | 45.04 | 3.63 | 0.71 | 37.86 | 35.06 | Missing | 23.19 | 38.61 | 16.52 |
| LS 6164 R | 41.71 | 25.34 | 22.52 | 24.86 | 4.29 | 3.9 | 39.24 | 44.45 | 2.03 | 2.72 | 20.19 | 25.56 |
| LS 6161 R | 35.87 | 38.13 | 39.57 | 24.31 | 3.75 | 1.14 | 22.01 | 34.04 | 0.17 | 9.01 | 26.75 | 37.43 |
| PAN 1614 R | 24.31 | 17.63 | 13.32 | 12.27 | 1.24 | 2.3 | 26.67 | 37.58 | 1.2 | 1.71 | 15.53 | 27.66 |
| NS 6448 R | 58.56 | 51.98 | 42.13 | 38.57 | 2.29 | 0.5 | 16.24 | 28.54 | 1.17 | 10.16 | 42.21 | 35.86 |
| DM 6.8i RR | 28.22 | 28.8 | 8.23 | 30.61 | 2.8 | 1.26 | 12.57 | 29.5 | 0.52 | 2.48 | 23.41 | 9.69 |
| NS 7211 R | 32.23 | 23.3 | 30.33 | 25.07 | 6.84 | 1.47 | 21.95 | 30.08 | 1.68 | 3.05 | 17.76 | 29.29 |
| PAN 1729 R | 41.04 | 31.66 | 23.04 | 30.36 | 1.29 | 3.28 | 24.37 | 41.51 | 0.73 | 5.38 | 8.67 | 21.14 |
| Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Lesion formation took place on all inoculated soybean leaves at 20°C and 25°C, with green leaves discolouring to become brown in colour. No analysis was done for 28°C since no lesion formation took place. Leaf lesion size measured for each individual leaf (data not shown) revealed highly significant (P<0.001) differences between soybean cultivar means (Table S2), although humidity (P=0.096) and temperature (P=0.247) means were not significantly (P>0.05) different from each other.

**Supplementary Table S2**. One-way ANOVA table for detached leaf assays.

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| --- | --- | --- | --- | --- | --- |
| Source of variation | DF | SS | MS | F-value | P-value |
| Temperature | 1 | 186.1 | 186.1 | 1.84 | 0.247 |
| Humidity | 1 | 474.5 | 474.5 | 4.68 | 0.096 |
| Temperature x Humidity | 1 | 7.1 | 7.1 | 0.07 | 0.804 |
| Cultivar | 28 | 8800.1 | 314.3 | 2.74 | <.001 |
| Temperature x Cultivar | 28 | 2614.8 | 93.4 | 0.81 | 0.736 |
| Humidity x Cultivar | 28 | 1599.2 | 57.1 | 0.5 | 0.985 |
| Temperature x Humidity x Cultivar | 28 | 2935.1 | 104.8 | 0.91 | 0.595 |
| Total | 345 | 95954 |   |   |   |