

Table S1. Significance of sources of variation in one-way ANOVA for a mean number of adults thrips during onion plants colonization, the seasonal mean number of thrips (adults +larvae) throughout the all growing season from tested onion cultivars, and seasonal mean percentage of damaged leaf area caused by feeding thrips in 2015 and 2016, df = 7.

| Indicators | Year | Significance | | | |
|--|------|--------------|------------|---------|---------|
| | | F cultivar | p cultivar | F block | p block |
| Mean number of migrating adults thrips per 10 plants | 2015 | 6.618 | <0.001 | 4.789 | 0.011 |
| | 2016 | 8.022 | <0.001 | 3.261 | 0.042 |
| Seasonal mean number of thrips adults and larvae per 10 plants | 2015 | 12.58 | <0.001 | 70.72 | <0.001 |
| | 2016 | 16.976 | <0.001 | 2.210 | 0.117 |
| Seasonal mean number of thrips larvae per 10 plants | 2015 | 5.592 | <0.001 | 0.864 | 0.475 |
| | 2016 | 5.729 | <0.001 | 2.131 | 0.127 |
| Mean percentage of damaged leaf area caused by feeding thrips | 2015 | 5.677 | <0.001 | 0.757 | 0.530 |
| | 2016 | 2.579 | 0.043 | 3.100 | 0.049 |

Table S2. Significance of sources of variation in one-way ANOVA for a mean number of thrips (adults + imago) collected from tested onion cultivars and mean percentage of damaged leaf area caused by feeding thrips in subsequent days of observation in 2015 and 2016, df = 7.

| Date | Mean Number of Thrips (Adults + Larvae/10 Plants) | | | | Mean Percentage of Damaged Leaf Area | | | |
|-----------|---|------------|---------|---------|--------------------------------------|------------|-----------|---------|
| | F cultivar | p cultivar | F block | p block | F cultivar | p cultivar | F block r | P block |
| Year 2015 | | | | | | | | |
| 24.06. | 3.880 | 0.007 | 11.353 | 0.000 | 1.407 | 0.254 | 2.313 | 0.105 |
| 02.07 | 5.958 | 0.000 | 3.209 | 0.043 | 3.239 | 0.017 | 2.356 | 0.101 |
| 11.07 | 2.992 | 0.024 | 1.189 | 0.338 | 0.591 | 0.756 | 3.646 | 0.029 |
| 17.07 | 2.669 | 0.038 | 5.329 | 0.007 | 3.438 | 0.013 | 0.267 | 0.848 |
| 21.07 | 1.476 | 0.229 | 3.067 | 0.030 | 6.618 | 0.000 | 1.849 | 0.169 |
| 28.07 | 5.157 | 0.001 | 7.817 | 0.001 | 1.262 | 0.316 | 1.566 | 0.227 |
| 04.08 | 3.950 | 0.007 | 4.697 | 0.011 | 1.056 | 0.424 | 0.692 | 0.567 |
| 11.08 | 1.800 | 0.140 | 4.236 | 0.017 | 1.734 | 0.155 | 1.522 | 0.238 |
| 19.08 | 2.141 | 0.084 | 3.219 | 0.043 | 4.392 | 0.004 | 3.415 | 0.036 |
| 24.08 | 6.834 | 0.000 | 10.842 | 0.000 | - | - | - | - |
| Year 2016 | | | | | | | | |
| 16.06 | 1.416 | 0.251 | 0.974 | 0.423 | 0.782 | 0.609 | 3.238 | 0.043 |
| 25.06 | 23.996 | 0.000 | 3.342 | 0.039 | 1.057 | 0.423 | 1.599 | 0.219 |
| 30.06 | 3.584 | 0.011 | 1.610 | 0.217 | 1.030 | 0.439 | 3.083 | 0.049 |
| 07.07 | 6.586 | 0.000 | 2.209 | 0.117 | 24.254 | 0.000 | 1.873 | 0.165 |
| 13.07 | 4.390 | 0.004 | 1.086 | 0.377 | 1.247 | 0.323 | 1.254 | 0.315 |
| 20.07 | 5.043 | 0.002 | 0.263 | 0.851 | 0.776 | 0.614 | 0.188 | 0.903 |
| 27.07 | 1.011 | 0.452 | 0.985 | 0.419 | 1.188 | 0.351 | 0.740 | 0.539 |
| 04.08 | 2.633 | 0.040 | 1.207 | 0.361 | 0.159 | 0.991 | 0.466 | 0.709 |
| 08.08 | 2.600 | 0.042 | 1.558 | 0.229 | 5.393 | 0.001 | 3.469 | 0.003 |
| 16.08 | 3.097 | 0.021 | 0.707 | 0.559 | 2.983 | 0.024 | 2.326 | 0.104 |

Table S3. Pearson's correlation between anatomical characteristics of onion leaves and the number of *Thrips tabaci* and percentage of damaged leaf area of onion leaves in 2016 (n =8).

| Parameters | No. of Thrips (Imago + Larvae) | | | | Damaged Leaf Area | | | |
|--|---------------------------------|-------|-----------------------------|-------|---|-------|---|-------|
| | Mean No. of Thrips on 08 August | | Seasonal Mean No. of Thrips | | Mean Percentage of Damaged Leaf Area on 08 August | | Seasonal Mean Percentage of Damaged Leaf Area | |
| | r | p | r | p | r | p | r | p |
| Mean leaf blade thickness [μm] | -0.598 | 0.118 | -0.638 | 0.881 | 0.326 | 0.429 | 0.032 | 0.940 |
| Epidermis thickness [μm] | -0.356 | 0.387 | 0.121 | 0.744 | 0.635 | 0.090 | 0.668 | 0.070 |
| Epidermal cells perimeter [μm] | 0.123 | 0.770 | -0.368 | 0.369 | 0.398 | 0.331 | 0.672 | 0.068 |
| Epidermal cells area [μm] | 0.118 | 0.781 | -0.361 | 0.379 | 0.361 | 0.379 | 0.653 | 0.079 |
| Mesophyll cells perimeter [μm] | -0.569 | 0.141 | -0.699 | 0.054 | 0.641 | 0.086 | 0.538 | 0.168 |
| Mesophyll cells area [μm] | -0.576 | 0.134 | -0.734 | 0.038 | 0.738 | 0.036 | 0.674 | 0.067 |
| Mean diameter of vascular bundles [μm] | -0.631 | 0.093 | -0.290 | 0.485 | 0.422 | 0.297 | 0.186 | 0.659 |
| Mean perimeter of vascular bundles [μm] | -0.710 | 0.048 | -0.301 | 0.469 | 0.325 | 0.431 | 0.157 | 0.710 |
| Mean area of vascular bundles [μm] | -0.685 | 0.061 | -0.349 | 0.396 | 0.421 | 0.299 | 0.186 | 0.659 |
| Mean distance between VB [μm] | -0.542 | 0.165 | -0.080 | 0.850 | -0.126 | 0.766 | -0.421 | 0.299 |

Note: bold r coefficient values designate significant correlation at $p < 0.05$; ns—not significant at $p < 0.05$.

Table S4. The contents of sugars and total phenols in damaged by *Thrips tabaci* leaves of the tested onion cultivars in 2015, df = 7.

| Cultivar | Mean Quantity (\pm SE) [mg /100 g FW ¹] | | | |
|------------------------|--|---------------------|--------------------|---------------------|
| | Soluble Sugars | Reducing Sugars | Sucrose | Total Phenols |
| Alibaba | 0.96 \pm 0.005 b ² | 0.123 \pm 0.003 a | 0.84 \pm 0.003 b | 112.25 \pm 3.02 a |
| Bila | 0.85 \pm 0.005 e | 0.089 \pm 0.002 d | 0.76 \pm 0.003 e | 82.13 \pm 0.28 cd |
| Karmen | 0.85 \pm 0.003 e | 0.084 \pm 0.003 e | 0.77 \pm 0.002 e | 85.84 \pm 0.67 bc |
| Kristine | 0.82 \pm 0.001 f | 0.080 \pm 0.000 f | 0.74 \pm 0.001 f | 74.37 \pm 1.33 e |
| Niagara F ₁ | 0.93 \pm 0.001 c | 0.108 \pm 0.002 b | 0.83 \pm 0.001 c | 89.13 \pm 0.72 b |
| Polanowska | 0.72 \pm 0.005 g | 0.093 \pm 0.001 c | 0.62 \pm 0.004 g | 78.47 \pm 0.49de |
| Tęcza | 0.89 \pm 0.009 d | 0.094 \pm 0.001 c | 0.80 \pm 0.008 d | 75.82 \pm 0.34 e |
| Wenta | 1.02 \pm 0.006 a | 0.123 \pm 0.002 a | 0.89 \pm 0.005 a | 109.85 \pm 0.91 a |
| F cultivar | 1088.3 | 184.44 | 638.9 | 120.230 |
| p cultivar | 0.000 | 0.000 | 0.000 | 0.000 |
| F blocks | 17.6 | 17.74 | 4.5 | 0.24 |
| p blocks | 0.000 | 0.000 | 0.014 | 0.870 |

Note: ¹FW = Fresh weight; ²means within a column followed by the same letter(s) are not significantly different (Duncan's Multiple Range Test P<0.05).

Table S5. The contents of sugars and total phenols in damaged by *Thrips tabaci* leaves of the tested onion cultivars in 2016, df = 7.

| Cultivar | Mean Quantity (\pm SE) [mg /100 g FW ¹] | | | |
|------------------------|--|--------------------|--------------------|--------------------|
| | Soluble sugars | Reducing sugars | Sucrose | Total phenols |
| Alibaba | 1.01 \pm 0.002 b ² | 0.12 \pm 0.003 a | 0.89 \pm 0.001 b | 75.87 \pm 0.35 c |
| Bila | 0.82 \pm 0.006 e | 0.09 \pm 0.002 d | 0.73 \pm 0.004 e | 62.06 \pm 0.22 f |
| Karmen | 0.97 \pm 0.023 c | 0.08 \pm 0.002 e | 0.89 \pm 0.021 b | 65.00 \pm 0.66 e |
| Kristine | 0.74 \pm 0.034 f | 0.06 \pm 0.002 g | 0.67 \pm 0.032 f | 48.82 \pm 0.10 e |
| Niagara F ₁ | 0.82 \pm 0.009 e | 0.11 \pm 0.003 b | 0.72 \pm 0.006 e | 67.66 \pm 0.80 d |
| Polanowska | 1.16 \pm 0.011 a | 0.10 \pm 0.004 c | 1.06 \pm 0.008 a | 55.90 \pm 0.15 g |
| Tęcza | 0.87 \pm 0.007 d | 0.07 \pm 0.001 f | 0.80 \pm 0.006 c | 90.21 \pm 0.78 a |
| Wenta | 0.85 \pm 0.006 de | 0.08 \pm 0.003 e | 0.76 \pm 0.003 d | 85.81 \pm 0.36 b |
| F cultivar | 147.98 | 383.22 | 124.50 | 741.8 |
| p cultivar | 0.000 | 0.000 | 0.000 | 0.000 |
| F blocks | 8.79 | 54.60 | 5.67 | 0.3 |
| p blocks | 0.000 | 0.000 | 0.005 | 0.810 |

Note: ¹FW = Fresh weight; ²means within a column followed by the same letter(s) are not significantly different (Duncan's Multiple Range Test P<0.05).

Table S6. The contents of chlorophyll a and b and the sum of carotenoids in not damaged and damaged by *Thrips tabaci* leaves of the tested onion cultivars in 2015, df = 7.

| Cultivar | Mean Quantity (\pm SE) [mg /100 g FW ¹] | | | | | |
|------------------------|--|---------------------|---------------------|-------------------------|----------------------|---------------------|
| | In not damaged onion leaves | | | In damaged onion leaves | | |
| | Chlorophyll a | Chlorophyll b | Sum of Carotenoids | Chlorophyll a | Chlorophyll b | Sum of Carotenoids |
| Alibaba | 565.76 \pm 9.96 a ² | 251.37 \pm 3.00 a | 113.55 \pm 1.02 b | 525.35 \pm 16.38 a | 240.29 \pm 5.12 a | 112.34 \pm 2.59 b |
| Bila | 472.22 \pm 2.53 b | 210.08 \pm 1.15 e | 101.30 \pm 0.47 d | 429.18 \pm 3.44 c | 200.76 \pm 6.49 bc | 97.59 \pm 1.31 b |
| Karmen | 478.17 \pm 2.36 b | 208.25 \pm 0.84 e | 107.83 \pm 0.84 c | 446.14 \pm 5.45 bc | 197.34 \pm 8.79 c | 99.55 \pm 3.85 c |
| Kristine | 372.87 \pm 1.48 d | 159.18 \pm 0.43 g | 83.10 \pm 0.34 f | 342.20 \pm 10.29 e | 140.25 \pm 3.90 e | 79.19 \pm 3.85 d |
| Niagara F ₁ | 562.75 \pm 1.76 a | 247.33 \pm 0.70 b | 127.20 \pm 0.29 a | 542.99 \pm 10.03 a | 219.55 \pm 6.35 b | 125.35 \pm 4.17 a |
| Polanowska | 420.38 \pm 5.25 c | 187.23 \pm 3.17 f | 90.21 \pm 0.95 e | 391.04 \pm 5.73 d | 177.15 \pm 4.13 d | 84.72 \pm 3.38 d |
| Tęcza | 472.97 \pm 2.72 b | 218.39 \pm 1.79 d | 112.78 \pm 0.78 b | 450.04 \pm 7.64 b | 201.66 \pm 8.55 bc | 109.19 \pm 2.35 b |
| Wenta | 470.1 \pm 7.78 b | 227.49 \pm 1.79 c | 102.98 \pm 0.39 d | 444.60 \pm 16.29 bc | 211.20 \pm 3.81 bc | 96.95 \pm 2.36 c |
| F cultivar | 354.4 | 514.0 | 529.0 | 119.35 | 22.678 | 24.08 |
| p cultivar | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| F blocks | 10.09 | 8.6 | 3.5 | 17.35 | 0.805 | 0.862 |
| p blocks | 0.000 | 0.000 | 0.033 | 0.000 | 0.505 | 0.476 |

Note: ¹FW = Fresh weight; ²means within a column followed by the same letter(s) are not significantly different (Duncan's Multiple Range Test P<0.05).

Table S7. The contents of chlorophyll a and b and the sum of carotenoids in not damaged and damaged by *Thrips tabaci* leaves of the tested onion cultivars in 2016, df = 7.

| Cultivar | Mean Quantity (\pm SE) [mg /100 g FW ¹] | | | | | |
|------------------------|--|---------------------|---------------------|-------------------------|----------------------|----------------------|
| | In not damaged onion leaves | | | In damaged onion leaves | | |
| | Chlorophyll a | Chlorophyll b | Sum of Carotenoids | Chlorophyll a | Chlorophyll b | Sum of Carotenoids |
| Alibaba | 601.69 \pm 8.19 b ² | 242.35 \pm 2.70 d | 161.75 \pm 1.76 c | 487.81 \pm 8.37 c | 218.92 \pm 3.39 bc | 118.33 \pm 1.77 c |
| Bila | 484.55 \pm 8.39 e | 91.24 \pm 3.171 f | 133.49 \pm 2.52 f | 390.62 \pm 5.11 e | 180.64 \pm 1.54 e | 100.48 \pm 1.57 d |
| Karmen | 508.77 \pm 1.01 d | 207.66 \pm 0.99 e | 140.96 \pm 1.17 e | 427.68 \pm 2.03 d | 195.39 \pm 3.13 d | 115.05 \pm 1.02 c |
| Kristine | 406.79 \pm 1.88 g | 172.52 \pm 3.02 h | 106.61 \pm 1.13 h | 336.21 \pm 17.41f | 143.64 \pm 7.48 f | 86.12 \pm 4.06 e |
| Niagara F ₁ | 571.56 \pm 2.62 c | 251.89 \pm 1.13 c | 150.59 \pm 0.50 d | 545.84 \pm 4.30 a | 225.64 \pm 1.61 ab | 137.44 \pm 1.25 ab |
| Polanowska | 440.75 \pm 1.54 f | 180.93 \pm 1.21 g | 113.48 \pm 2.36 g | 390.07 \pm 9.97 e | 186.39 \pm 3.96 e | 100.30 \pm 2.99 d |
| Tęcza | 639.88 \pm 0.79 a | 279.24 \pm 0.85 a | 186.72 \pm 1.39 a | 511.67 \pm 8.27 b | 210.03 \pm 5.54 c | 134.14 \pm 2.84 b |
| Wenta | 633.53 \pm 5.49 a | 274.37 \pm 1.94 b | 169.76 \pm 1.39 b | 456.51 \pm 13.66 a | 229.93 \pm 5.69 a | 142.69 \pm 4.46 a |
| F cultivar | 755.3 | 931.7 | 387.76 | 176.05 | 80.51 | 8.48 |
| p cultivar | 0.000 | 0.000 | 0.000 | 0.0000 | 0.000 | 0.000 |
| F blocks | 10.5 | 11.0 | 3.73 | 14.68 | 6.37 | 103.47 |
| p blocks | 0.000 | 0.000 | 0.026 | 0.000 | 0.003 | 0.000 |

Note: ¹FW = Fresh weight; ²means within a column followed by the same letter(s) are not significantly different (Duncan's Multiple Range Test P<0.05).

Table S8. Significance of sources of variation in two-way ANOVA for biochemical parameters of leaves of tested onion cultivars in 2015 and 2016.

| Biochemical Parameter | Year | Source of Variation | | | | | | | |
|--|------|---------------------|----------|------------------|----------|-------|----------|--------|----------|
| | | Cultivars (A) | | Damage Level (B) | | A × B | | Blocks | |
| | | F | <i>p</i> | F | <i>p</i> | F | <i>p</i> | F | <i>p</i> |
| Soluble sugars content [g/100 g FW*] | 2015 | 892.0 | <0.001 | 3851.0 | <0.001 | 80.0 | <0.001 | 16.0 | <0.001 |
| | 2016 | 274.9 | <0.001 | 1082.9 | <0.001 | 8.5 | <0.001 | 20.0 | <0.001 |
| Reducing sugars content [g/100 g FW] | 2015 | 93.3 | <0.001 | 100.4 | <0.001 | 24.9 | <0.001 | 23.0 | <0.001 |
| | 2016 | 256.2 | <0.001 | 37.2 | <0.001 | 22.0 | <0.001 | 22.9 | <0.001 |
| Sucrose content [g/100 g FW] | 2015 | 707.0 | <0.001 | 4181.0 | <0.001 | 78.0 | <0.001 | 5.0 | 0.007 |
| | 2016 | 249.0 | <0.001 | 1116.0 | <0.001 | 12.0 | <0.001 | 15.0 | <0.001 |
| Phenols content [g/100 g FW] | 2015 | 373.0 | <0.001 | 380.0 | <0.001 | 3.0 | 0.021 | 1.0 | 0.612 |
| | 2016 | 662.0 | <0.001 | 249.0 | <0.001 | 17.0 | <0.001 | 0.0 | 0.707 |
| Chlorophyll a content [mg/100 g FW] | 2015 | 294.2 | <0.001 | 130.7 | <0.001 | 1.2 | 0.311 | 22.8 | <0.001 |
| | 2016 | 500.9 | <0.001 | 974 | <0.001 | 19.9 | <0.001 | 20.2 | <0.001 |
| Chlorophyll b content [mg/100 g FW] | 2015 | 85.34 | <0.001 | 43.6 | <0.001 | 0.9 | 0.497 | 0.89 | 0.455 |
| | 2016 | 370.3 | <0.001 | 431.9 | <0.001 | 40.9 | <0.001 | 11.9 | <0.001 |
| Content of carotenoids [mg/100 g FW] | 2015 | 89.7 | <0.001 | 15.8 | <0.001 | 0.6 | 0.774 | 1.6 | 0.198 |
| | 2016 | 341.8 | <0.001 | 1046.6 | <0.001 | 31.2 | <0.001 | 11.4 | <0.001 |
| df | — | 7 | | 1 | | 7 | | 3 | |
| Error df | — | 45 | | | | | | | |

Note: *FW=Fresh weight; significant at $p<0.05$