

Supplementary Data

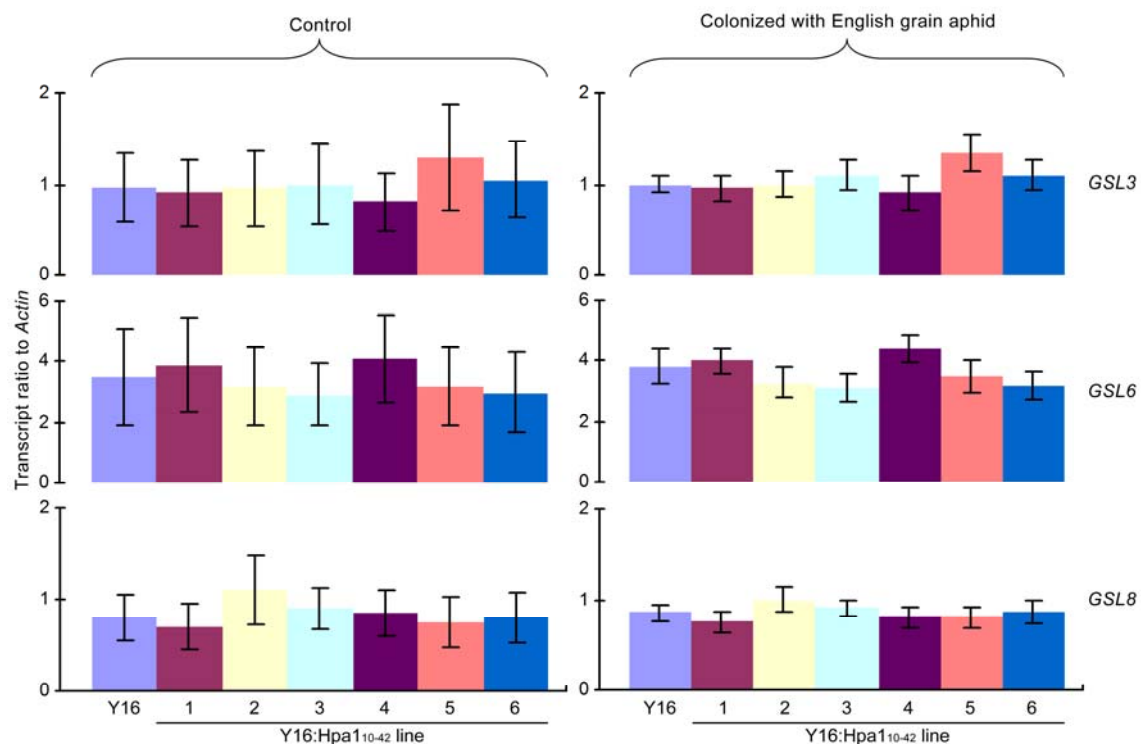


Fig. S1. The expression of *GSL3*, *GSL6*, and *GSL8* in leaves of Y16 and Y16:Hpa1₁₀₋₄₂ plants. Plants were colonized with English grain aphid or not colonized in control and gene expression was analyzed six hours later. Data shown are mean values \pm SD bars of results from three experimental repeats (15 plants/repeat).

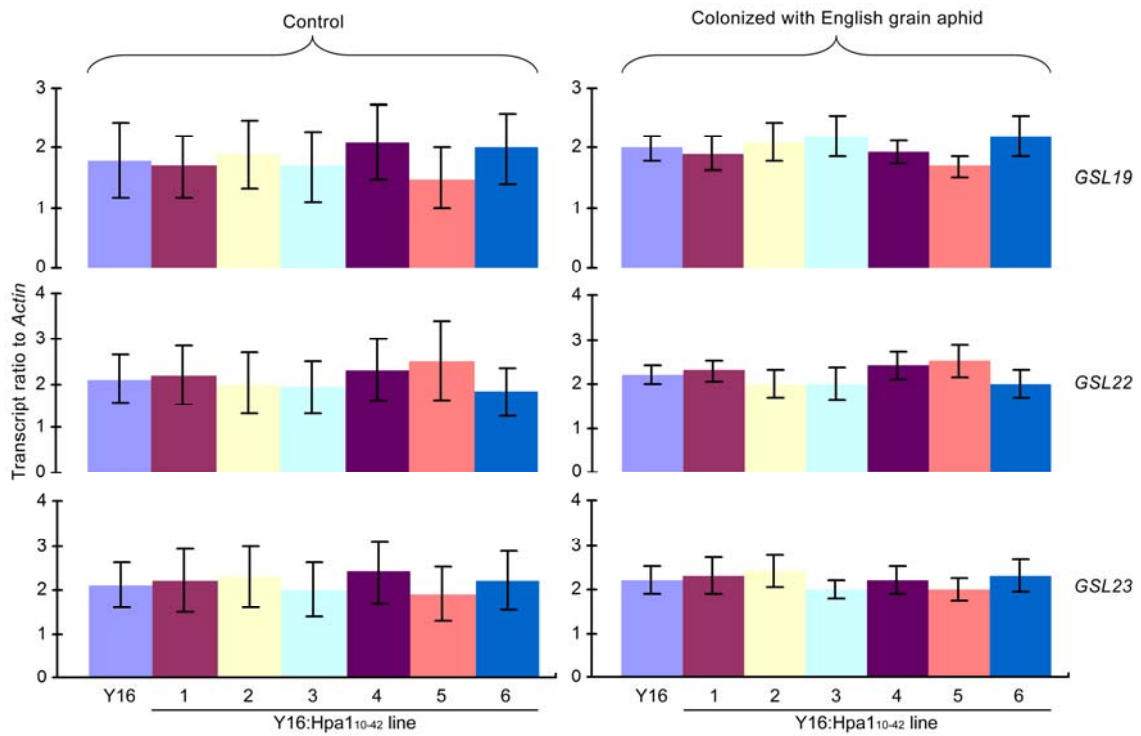


Fig. S2. The expression of *GSL19*, *GSL22*, and *GSL23* in leaves of Y16 and Y16:Hpa1₁₀₋₄₂ plants. Plants were colonized with English grain aphid or not colonized in control and gene expression was analyzed six hours later. Data shown are mean values \pm SD bars of results from three experimental repeats (15 plants/repeat).

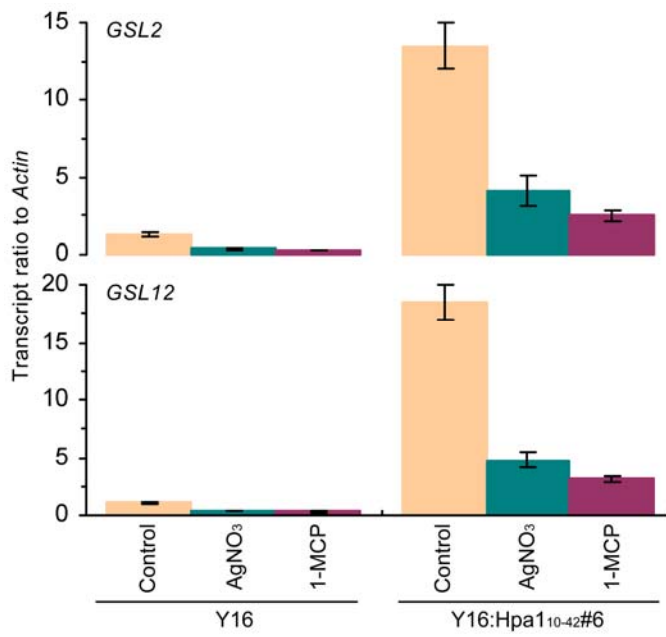


Fig. S3. The effects of ethylene signaling inhibitors on the expression of *GSL2* and *GSL12* genes. Plants were colonized with aphids and simultaneously treated with water (control), AgNO₃, or 1-MCP. Six hours later, gene expression was analyzed. Data shown are mean values \pm SD bars of results from three experimental repeats (10 plants/repeat).



Fig. S4. The effects of leaf colonization with aphids on the root growth of Y16 and Y16:Hpa1₁₀₋₄₂ plants. Plants were cultured in the Hogland nutrition liquid and kept from aphid infestations in the experimental control group. In the aphid colonization group, the upper sides of the top two expanded leaves of 15-day-old plants were colonized with uniform 10-day-old aphids (5 aphids/leaf). Twenty days later, roots were excised and photographed. Each root photo represents 15 plants.

Table S1. Information on genes analyzed and primers used in this study

Gene	GenBank accession number	Primers	Region in the gene sequence	RT-PCR product size (bp)
<i>Actin1</i>	CA483746	5'-GGCCGGAGGCCGAGGGGG-3', 5'-CGGTGGCTTTGCCACAAA-3'	1–213	213
<i>Hpa1₁₀₋₄₂</i>	AY875714	5'-ATGGGCAGCGCGTCCAACCTTC-3', 5'-TCAGTGGTGGTGGTGGTGGTGCA-3'	33–126	99
* <i>PP2-A1</i>	NM_118104	5'-CACTTCGACCTCCTAGGCCG-3', 5'-CTCATAACATTGAGAAAGTGAT-3'	514–739	199
* <i>PP2-A2</i>	NM_001160782	5'-GTCCAGCTGCTACTGAAAAGGA-3', 5'-CTTTGCAACCTCTGATCTTAC-3'	108–312	205
<i>GSL2</i>	DQ0864383	5'-CTGGGAGTGCTGGTGCTGAT-3', 5'-TAACAATCACTCCAAGCAGTATCTC-3'	136–343	208
<i>GSL3</i>	DQ086484	5'-ATTGCCCAAGCGATCAAGCCTGTC-3', 5'-TCTGCTGAACGCCTGGTTGAAAA-3'	246–428	183
<i>GSL6</i>	AM743080	5'-ACGGCGAGACCGACGAAA-3', 5'-GCCAGGAGAAACCGAACCAG-3'	230–451	222
<i>GSL8</i>	DQ086485	5'-TCTATGTGACTACTGTTGGGTT-3', 5'-CACGCTCAATGCTTTATTT-3'	121–275	155
<i>GSL10</i>	DQ086486	5'-GGGGACAGAGCGAGAACA-3', 5'-GTAGGCAACACGAAGAGC-3'	3–195	193
<i>GSL12</i>	DQ086487	5'-GTTCTTCTCGTGGTTCCCCTTT-3', 5'-GTCCCTAATCAAGTCCAGAAATGTA-3'	205–386	182
<i>GSL19</i>	DQ086488	5'-TCATCCCAACTGTCTGGTTTATT-3', 5'-TATCTACGGAGCACAGCCCCACT-3'	282–453	171
<i>GSL22</i>	DQ086488	5'-ATCGTTCTGGGAGTGCTGGTGCT-3', 5'-CCACAGAAATAACACTGCCCCAC-3'	130–307	178
<i>GSL23</i>	DQ086490	5'-AACCTCCGCCTTCCGACAGA-3', 5'-GCATACAGGAACACTCGGAATC-3'	31–222	192

*Primers for both genes were designed according to the conserved region in the corresponding gene orthologs identified in different plant species (Dinant *et al.*, 2003) and synthesized against the conserved regions in the *Arabidopsis* orthologs. The primers were used in this study after RT-PCR products obtained from amplifying wheat RNA had been confirmed to be more than 87% identity with the conserved regions of previously reported gene orthologs of different plant species (Dinant *et al.*, 2003; NCBI nucleic acid databases and BLAST searches).

Table S2. Characters of seeds from plants that were not colonized with aphids

Wheat genotype	Long/short axis ratio	Long axis (mm)	Short axis (mm)	Roundness	Equivalent cycle diameter (mm)	Size (mm ²)	Circumference (mm)	Weight (g)
Y16	2.15	4.61	2.21	1.27	3.14	7.84	11.57	0.050
Y16:Hpa1 ₁₀₋₄₂ #6	2.13	4.58	2.20	1.26	3.11	7.80	11.55	0.049