

**Comparative Performance and Transcriptomics of Tomato (*Solanum lycopersicum*) in Response to *Bombus terrestris* (Hymenoptera, Apidae) and Hormone (2,4-Dichlorophenoxyacetic acid)**

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**Table S1 Summary of quality for sample sequencing data**

Sample	raw_reads	clean_reads	clean_bases	error_rate	Q20	Q30	GC_pct
Bumblebee I	48762446	46651184	7.0G	0.03	97.44	92.21	45.92
Bumblebee II	46406730	43608146	6.54G	0.03	97.65	92.99	45.53
Bumblebee III	46139742	38970768	5.85G	0.03	97.81	93.39	46.97
Hormone I	46023700	42536362	6.38G	0.03	97.75	93.24	44.73
Hormone II	46763002	44511318	6.68G	0.03	97.76	93.28	45.88
Hormone III	47779726	45514128	6.83G	0.03	97.66	93.05	46.01

**Table S2 Comparison statistics between samples and reference genomes**

sample	total_map	unique_map	multi_map	positive_map	negative_map	splice_map	unsplice_map	proper_map
Bumblebee I	44183276(94.71%)	43006624(92.19%)	1176652(2.52%)	21441145(45.96%)	21565479(46.23%)	14348784(30.76%)	28657840(61.43%)	41493136(88.94%)
Bumblebee II	42325854(97.06%)	41696913(95.62%)	628941(1.44%)	20830826(47.77%)	20866087(47.85%)	13299644(30.5%)	28397269(65.12%)	40581152(93.06%)
Bumblebee III	37804816(97.01%)	37265618(95.62%)	539198(1.38%)	18617634(47.77%)	18647984(47.85%)	12310331(31.59%)	24955287(64.04%)	36174650(92.83%)
Hormone I	40924411(96.21%)	40310749(94.77%)	613662(1.44%)	20139686(47.35%)	20171063(47.42%)	12990025(30.54%)	27320724(64.23%)	39121794(91.97%)
Hormone II	43273318(97.22%)	42626282(95.77%)	647036(1.45%)	21295788(47.84%)	21330494(47.92%)	14259785(32.04%)	28366497(63.73%)	41458550(93.14%)
Hormone III	44067556(96.82%)	43445716(95.46%)	621840(1.37%)	21704704(47.69%)	21741012(47.77%)	12896706(28.34%)	30549010(67.12%)	42084204(92.46%)

**Table S3 Designed sequences of qRT-PCR primers for candidate genes**

Gene_id	Gene_description	Abbreviation	log2.Fold change Bumblebee VS. Hormone	Primer	
				Forward	Reverse
100191129	anthocyanin acyltransferase	ATH	8.709018517	Forward	CACTTGCTGGAAGGTGTCTGAAGA
				Reverse	GCCAGAGAATCCATCACCTGTTGT
544150	dihydroflavonol 4-reductase	DIH	10.475046412	Forward	GCCATTGAGACTTGCCGACAGA
				Reverse	GCGAGAGCCTTCAGTTCTTCCA
100736504	flavonoid 3'5' hydroxylase	FLH	4.520702806	Forward	CACTGCTGGTACAGACACTTCATCA
				Reverse	CATTCCCACGAGGTTCAATCTTTC
101266562	proteinase inhibitor 1-like	PII	7.52785265	Forward	AGCCCAACTTGGAAATGTCAAGGAAA
				Reverse	CCAACCACAGGCATTGATACAGCAT
101265368	proteinase inhibitor I-B	PIB	2.922507615	Forward	CCCGACCCGTTACAAAGTCCCTA
				Reverse	GCAAGAAGCAAGAAAGCAAGCACAT
101254142	cellulose synthase-like	CS	11.30924054	Forward	GGAGAAGACGAAGATGACGCCTATG

	protein D4			Reverse	GCCAGCACCAGCAACACCTT
101267720	sucrose synthase	<i>SUC</i>	5.037144557	Forward	GGTGTGGTGGAGACAGAAGGAA
				Reverse	TTCGTCAGCCAGCCTTCTATGAG
101249782	callose synthase 5	<i>CAL</i>	6.466395466	Forward	GCCGCCACCACTACCTTCTCTA
				Reverse	CTCTGTCTGCTTGTTCCTCCTTGT
101260990	salicylic acid-binding protein 2	<i>SAB2</i>	-10.31959265	Forward	TGGAGGTTGGTGTGGTACAAACT
				Reverse	AATATGGATGGCAGAGGCTCTCAT
543526	jasmonic acid 2	<i>JA2</i>	-4.595828058	Forward	CGGATAAGGTGATAACTTCGCAAGG
				Reverse	ATGGCTGTATTCATTACTGCTGTGT
101244732	auxin-responsive protein SAUR68	<i>SAUR68</i>	-7.712154354	Forward	CAGCCATGCAGAGGAAGAGGATT
				Reverse	AGAAGTCGAACAGCAAGAAGAAGGA
101268293	auxin-responsive protein SAUR78	<i>SAUR78</i>	-10.57095078	Forward	GGCGTAGCAGCAACTCATCATCA
				Reverse	AACAGCACGACTTCACATCCAAC
101247499	auxin-responsive protein SAUR50	<i>SAUR50</i>	-4.465197299	Forward	TCAAACCACACCTCAAAGTCACCAA
				Reverse	TCTCGCTGATTAAAGGGCAGTCTG
544056	TAS14 peptide	<i>TAS14</i>	-6.787759195	Forward	GCACAATACGGCAATCAAGACCAA
				Reverse	TGTTGTCCAGGCATCTTCTCCATT

**Table S4 Quantitative real-time PCR (qRT-PCR) analysis of 14 candidate genes**

Gene_id	Gene_description	Abbreviation	log2.Fold_change Bumblebee VS. Hormone	Relative gene expression of sample treated by bumblebee	Relative gene expression of sample treated by hormone
100191129	anthocyanin acyltransferase	<i>ATH</i>	8.709018517	16.32±3.084	0.929±0.258
544150	dihydroflavonol 4-reductase	<i>DIH</i>	10.475046412	20.68±4.961	0.961±0.263
100736504	flavonoid 3'5' hydroxylase	<i>FLH</i>	4.520702806	8.6±2.367	0.952±0.256
101266562	proteinase inhibitor 1-like	<i>PII</i>	7.52785265	13.68±1.096	0.966±0.143
101265368	proteinase inhibitor I-B	<i>PIB</i>	2.922507615	3.93±1.56	0.938±0.299
101254142	Cellulose synthase-like protein D4	<i>CS</i>	11.30924054	19.68±2.932	0.995±0.288
101267720	sucrose synthase	<i>SUC</i>	5.037144557	11.67±2.316	0.946±0.161
101249782	callose synthase 5	<i>CAL</i>	6.466395466	15.89±3.281	0.975±0.149
101260990	salicylic acid-binding protein 2	<i>SAB2</i>	-10.31959265	0.463±0.097	0.965±0.099
543526	jasmonic acid 2	<i>JA2</i>	-4.595828058	0.262±0.091	0.997±0.086
101244732	auxin-responsive protein SAUR68	<i>SAUR68</i>	-7.712154354	0.496±0.075	0.953±0.153
101268293	auxin-responsive protein SAUR78	<i>SAUR78</i>	-10.57095078	0.389±0.066	1.010±0.128
101247499	auxin-responsive protein SAUR50	<i>SAUR50</i>	-4.465197299	0.1269±0.086	0.982±0.112
544056	TAS14 peptide	<i>TAS14</i>	-6.787759195	0.2116±0.079	0.932±0.136