

Marker and *CKX2* gene expression-based selection of highyielding tomato (*Lycopersicon esculentum* Mill.) germplasm

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Supplementary Data

Suppl. Table1 —Description of the 34 Tomato Germplasm Evaluated for Ten Agro-Morphological Traits
Traits (Mean of triplicate data)

Sr. No.	Genotypes	Day to flowering	Days to maturity	Plant height(cm)	No of branch	No of Fruit/Cluster	Fruit length(cm)	Fruit width(cm)	No. of locule	No. of fruit plant	Weight of fruit/plant in kg
1	KS-6026	19	66	47.5	7.5	5.5	3.86	3.7	3	82	2.262
2	KS-6512	27	74	38.5	11.5	6	3.48	3.24	2	62	1.181
3	KS-7039	15	70	42.5	6	6	3.58	3.56	2	64	1.75
4	KS-7053	15	72	62.5	11	4.5	3.28	4.02	3	99	2.991
5	KS-7048	19	68	67.5	10	6.5	3.78	3.86	2	101	2.264
6	KS-7202	12	63	50	6	5.5	3.56	3.64	2	126	2.035
7	KS-7206	12	74	65	8.5	5	3.16	3.3	3	99	2.04
8	KS-7804	19	79	47.5	8.5	6	3.75	4.1	3	80	2.05
9	KS-8105	12	75	52.5	6.5	6.5	3.70	4.54	3	79	3.211
10	KS-8202	19	64	67.5	9.5	7	3.54	3.96	2	93	3.111
11	KS-8203	19	74	66	10.5	5.5	3.88	4.46	3	82	2.125
12	KS-8506	22	77	60	10	9	3.66	5.26	3	82	2.362
13	KS-8716	15	68	47.5	7	5	3.20	3.68	3	121	2.9
14	KS-8717	22	64	50	6.5	8.5	2.72	3.22	3	62	1.18
15	KS-8730	31	80	72.5	12	6.5	3.92	3.7	2	130	3.055
16	KS-8731	19	22	67.5	12.5	7.5	3.74	3.5	2	95	2.464
17	KS-8738	27	78	62.5	9	7	3.52	3.94	2	54	1.342
18	KS-8751	12	74	42.5	6	6.5	3.48	3.44	3	37	1.037
19	KS-8752	15	76	62.5	8.5	11	3.90	4.28	2	64	1.468
20	KS-8757	15	85	40	7	6.5	3.98	3.92	3	71	1.9
21	KS-8759	19	78	42.5	6.5	4.5	3.58	4.04	4	27	0.825
22	KS-8761	22	97	55	9	6.5	3.62	3.98	3	49	1.666
23	KS-8767	22	82	52.5	9.5	5.5	5.92	3.72	2	51	1.375
24	KS-9423	27	92	60	8	6.5	4.70	4.1	3	38	1.108
25	KS-9424	31	107	57.5	9.5	7	4.18	3.48	2	36	0.85
26	KS-9425	31	109	66	9	8	4.24	3.86	2	61	1.5
27	KS-9426	27	95	80	10	8.5	4.86	4.68	2	90	2.691

28	KS-9429	31	95	7205	8.5	4	4.08	4.8	3	69	1.89
29	KS-9432	24	82	55	8	6.5	6.20	6.62	5	34	2.192
30	KS-1901	27	95	60	5.5	6.5	5.95	6.1	3	38	2.248
31	KS-1903	28	92	57.5	8.5	6	5.15	5.65	4	50	2.31
32	KS-1904	24	88	55	7	7.5	6.50	6.6	3	55	1.95
33	KS-1905	26	87	67.5	8.5	6.5	4.97	5.5	3	60	2.15
34	KS-1906	23	85	52.5	6	7.5	5.00	5.2	4	65	2.4

Suppl. Table 2 — List of primers and their amplification characteristics						
S. No.	Locus name	Primer sequence	Annealing temperature (T _m)°C	No. of alleles	Approximate size range (bp)	PIC
1	UBC 807	AGAGAGAGAGAGAGAGT	50	6	500-1400	0.4675
2	UBC 808	AGAGAGAGAGAGAGAGG	50	3	750-1500	0.407
3	UBC 809	AGAGAGAGAGAGAGAGG	50	3	750-1100	0.50
4	UBC 810	GAGAGAGAGAGAGAGAT	50	4	1300-1800	0.4757
5	UBC 811	GAGAGAGAGAGAGAGAC	50	3	300-1100	0.4983
6	UBC 815	CTCTCTCTCTCTCTG	50	9	300-1400	0.299
7	UBC 817	CACACACACACACAAA	50	4	600-1200	0.3961
8	UBC 820	GTGTGTGTGTGTGTGTT	50	8	650-1800	0.3001
9	UBC 851	TCTCTCTCTCTCTCA	50	3	400-750	0.45
10	UBC 825	ACACACACACACACT	50	7	650-1300	0.3067
11	UBC 834	AGAGAGAGAGAGAGAGYT	50	7	600-2100	0.4567
12	UBC 835	AGAGAGAGAGAGAGAGYC	50	7	250-3000	0.4253
13	UBC 840	GAGAGAGAGAGAGAGYT	50	6	400-2000	0.3493
14	UBC 841	GAGAGAGAGAGAGAGYC	50	7	700-900	0.3508
15	UBC 842	GAGAGAGAGAGAGAGAYG	50	7	300-2000	0.4045
16	UBC 856	ACACACACACACACAYA	50	6	750-1800	0.365
17	UBC 825	ACACACACACACACT	50	7	650-1300	0.3067
18	UBC822	TCTCTCTCTCTCTCA	50	5	600-1200	0.3056

Suppl. Table 3 — Description of 11 Promising Tomato Germplasms Based on Number and Weight of Fruits per Plant, with Reference to KS-9424

S. No	Genotypes	No. of fruit/ plant				Weightof fruit/plantin kg			
		R1	R2	R3	Mean	R1	R2	R3	Mean
1	KS-6026	79	83	84	82	2.241	2.272	2.273	2.262
2	KS-7053	101	100	96	99	2.997	2.996	2.980	2.991
3	KS-7048	100	104	99	101	2.266	2.273	2.253	2.264
4	KS-8105	81	78	78	79	3.215	3.209	3.209	3.211
5	KS-8202	90	95	94	93	3.102	3.116	3.115	3.111
6	KS-8203	77	85	84	82	2.116	2.130	2.129	2.125
7	KS-8506	81	85	80	82	2.363	2.368	2.355	2.362
8	KS-8716	123	115	125	121	2.940	2.800	2.960	2.900
9	KS-8730	126	131	133	130	3.042	3.061	3.062	3.055
10	KS-8731	101	91	93	95	2.468	2.457	2.467	2.464
11	KS-9426	87	89	94	90	2.678	2.695	2.700	2.691
12	KS-9424	25	39	44	36	0.60	0.95	1.00	0.85

Suppl. Table 4 — List of qRTPCR primers and their sequences

S.N.	Genes	Primer sequence
1	CKX2	Forward: CACGGCCCTCAAATCAGTAA Reverse: GACCAAGTCCTCCAAGAACAG
2	Actin	Forward: TGTGCCAATCTACGAGGGTT Reverse: ACAACGGCACTACTGGATCA