

Supplementary Tables

Supplementary Table S1. Primers used for the qPCR experiments.

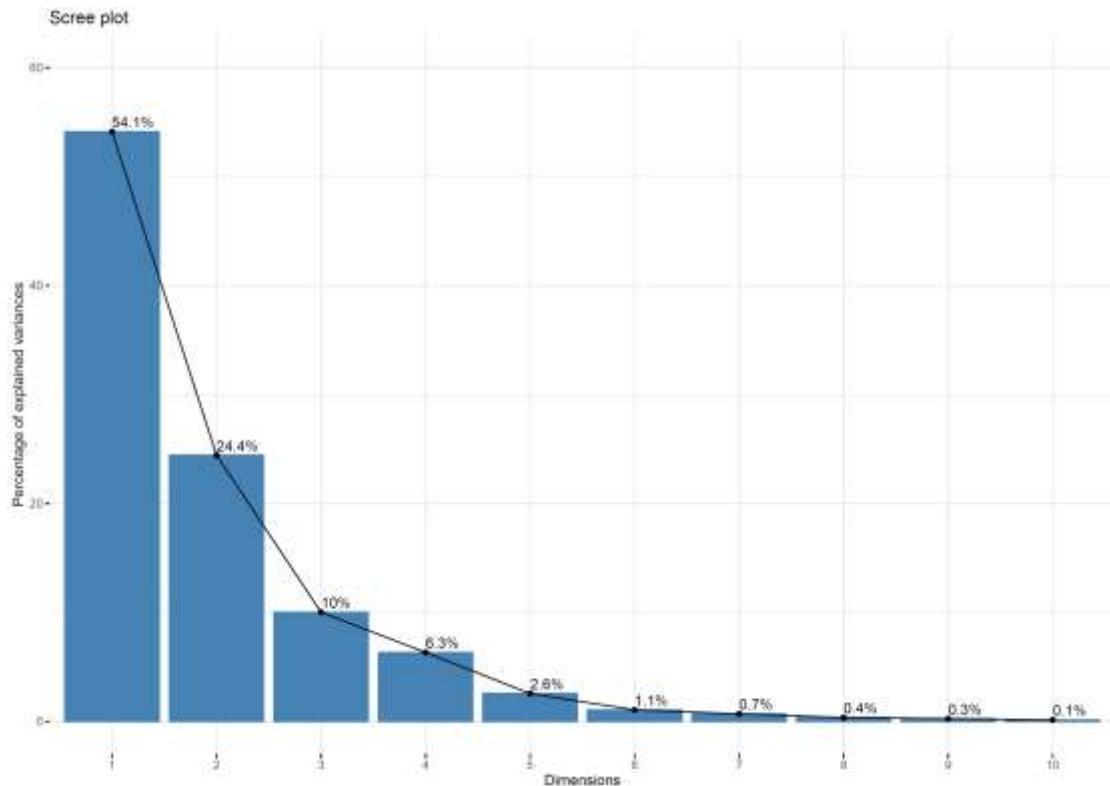
Gene	Abbreviation	Forward (5' → 3')	Reverse (5' → 3')
Elongation Factor 1a	<i>EF1a</i>	CTCCAGTTCTGATTGCCACAC	GCTCCTTCCAGACCTCCTATC
18S rRNA	<i>18S</i>	TTCAGACTGTGAAACTGCGAATGG	TCATCGCAGCAACGGGCAA
CYP71D178	<i>CY178</i>	CAAGGAATGACTGCTGCTGAC	TTGGATTGTGGATTGTTGGAACC
CYP71D179/182	<i>CY179/182</i>	CGTGGCTTCTCAACCTTCTC	CGCTCTTCTTCACCCCTATGC
<i>Terpene synthase 2</i>	<i>TPS2</i>	GTGGCTGAGTTGGTGGAAAGG	TTGGCGTTCTCTAGGTATTCTGC
<i>Terpene synthase 3</i>	<i>Tps3</i>	AGGCAGAACATGGTGTAGCAAG	GATCCTCCATCCAACTAAAGAAG
<i>Terpene synthase 4</i>	<i>Tps4</i>	ACCTCAACAAATGCCAAAGTTCG	TGGTATCCGTACACGCTCTCG
<i>Terpene synthase 6</i>	<i>Tps6</i>	AGGGCGTATCGGAGGAAGAAG	GGTCGTAAGGATTGGAACAGAGG

Supplementary Table S2. Effect of irrigation regime on essential oil composition of two *Thymus* species at two developmental stages (50 and 100 % blooming). Within each column, different letters indicate significant differences ($n = 3$). Retention indices (RI) were generated with a standard solution of n-alkanes (C_6-C_{24}) on the HP-5MS column.

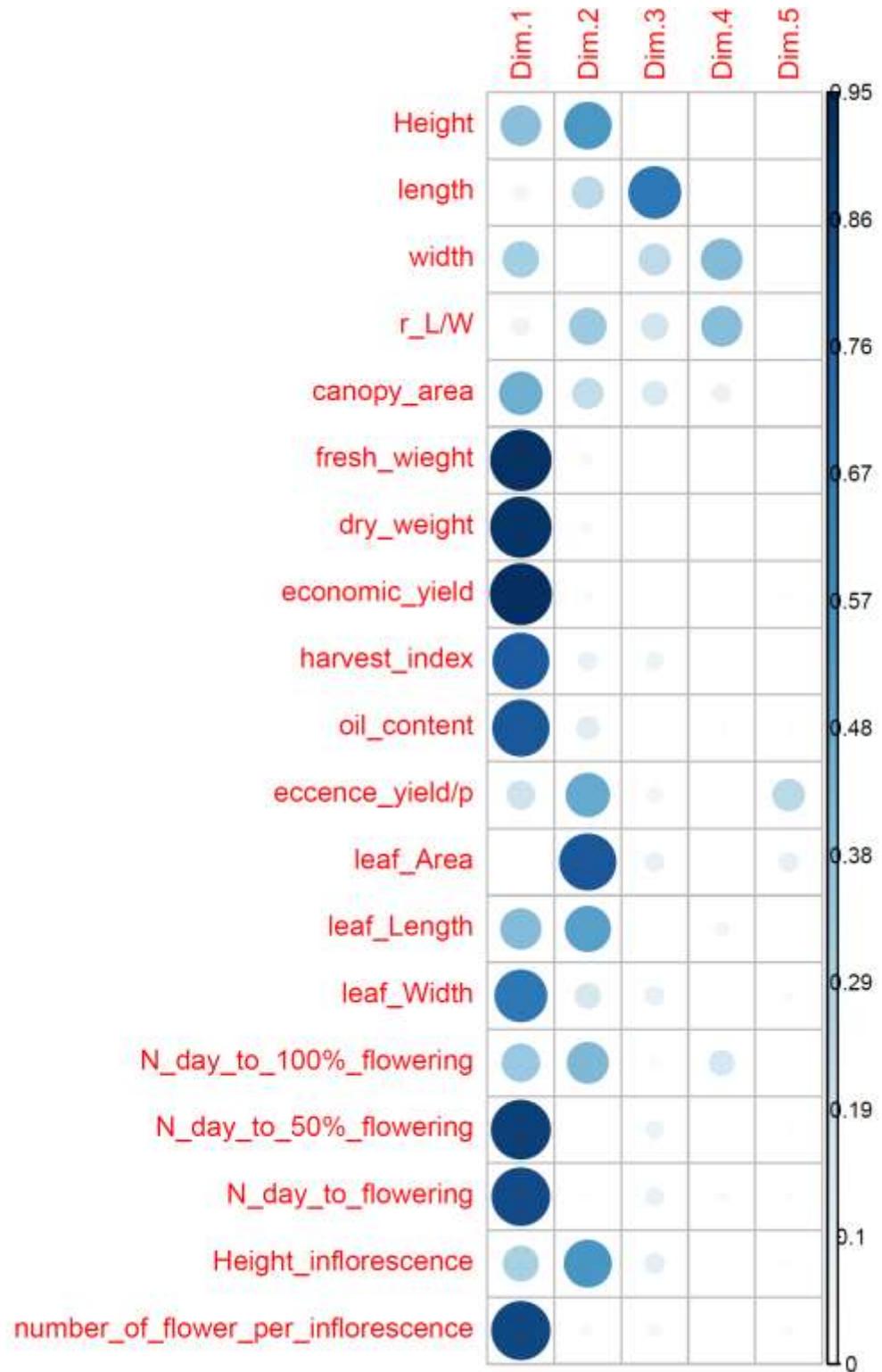
Compound	RI	<i>T. armeniacus</i>				<i>T. kotschyanius</i>			
		75% field capacity		50% field capacity		75% field capacity		50% field capacity	
		50 % flowering	100 % flowering	50 % flowering	100 % flowering	50 % flowering	100 % flowering	50 % flowering	100 % flowering
Cis-1,2-Dimethylcyclopentane	447	-	0.07	-	-	-	-	-	-
Cyclopentane, 1,3-dimethyl-	515	-	-	-	-	-	-	-	0.28
ethyl pentyl ether	751	-	-	-	-	-	-	-	0.04
Heptane, 2-methyl	756	-	-	-	-	-	-	-	0.05
Heptane, 3-methyl	766	-	-	-	-	-	-	-	0.07
Methyl isovalerate	786	-	-	-	-	-	-	-	-
Octane	800	-	0.08	-	0.14	-	-	-	0.36
Ethyl isovalerate	866	-	-	-	-	-	-	-	-
o-Xylene	892	-	-	-	0.11	-	-	-	0.11
Tricyclene	918	0.2	-	-	-	-	-	-	0.03
α -Thujene	928	5.5	0.77	-	0.25	9.29	1.32	12.9	0.87
α -Pinene	934	12.7	3.37	15.52	1.06	-	1.05	-	0.79
Camphene	943	3.52	0.14	3.08	0.4	7.19	1.28	1.3	0.83
β -Pinene	967	2.16	0.88	-	0.34	-	0.34	5.59	0.24
Sabinene	971	4.14	0.24	12.23	-	2.31	-	3.71	-
Myrcene	988	6	0.57	8.34	0.2	8.09	1.13	-	0.63
Decane	998	-	-	-	-	-	-	-	0.1
3-carene	1006	0.38	0.15	-	-	0.15	-	-	0.07
α -Phellandrene	1007	0.96	0.12	1.02	-	-	0.21	1.5	0.15
α -Terpinene	1018	4.57	0.69	-	0.32	-	1.51	7.83	0.82
o-Cymene	1034	11.9	10.1	16.56	8.83	17.83	15.35	4.22	10.9
Limonene	1035	-	-	-	-	-	-	2.03	-
1,8-Cineole	1037	12.6	10.5	-	10.3	-	-	-	-
Sylvestrene	1044	-	-	-	-	1.55	-	-	-
Cis- β -ocimene	1047	-	-	0.22	-	-	-	-	-
Trans- β -ocimene	1050	-	-	0.11	-	-	-	-	-
γ -Terpinene	1073	23.2	3.94	19.11	1.71	21.93	7.06	28.1	3.23
Trans-sabinene-hydrate	1085	0.79	2.24	0.82	2.29	0.37	-	-	0.58
α -terpinolene	1090	0.28	0.07	0.92	-	0.96	-	0.59	-
cis-sabinene hydrate	1102	-	0.43	0.14	0.45	-	0.75	0.53	0.29
linalool	1105	-	-	0.18	0.21	1.43	0.63	1.2	0.73
nonanal	1110	-	-	-	-	-	-	-	-
cis-2-menthol	1115	-	-	-	-	-	0.2	-	-
Limonene oxide	1122	-	0.07	-	-	-	-	-	-
Trans-pinocarveol	1139	-	0.34	-	0.47	-	-	-	-
Epiphrotocitral A	1140	-	-	-	-	-	-	-	-
Camphor	1147	0.56	1.4	1.23	3.21	-	-	-	-
4,5-Epoxy-1-isopropyl-4-methyl-	1158	-	-	-	0.53	-	-	-	-
Trans-verbenol	1160	-	0.41	-	-	-	-	-	0.09
Borneol	1168	0.87	4.99	1.88	5.73	1.96	3.92	2.03	3.77
terpinen-4-ol	1179	0.22	0.63	0.76	0.95	0.17	0.26	0.21	0.14
α -Terpineol	1192	0.34	2.65	0.97	3.35	-	-	-	0.12
p-Cymen-8-ol	1195	-	-	-	-	-	-	-	0.11
E-Dihydrocarvone	1197	-	0.25	0.1	-	-	-	-	0.07

Cis-Dihydrocarvone	1217	-	-	-	0.24	-	-	-	-
Trans-carveol	1236	-	0.07	-	-	-	-	-	-
Thymol methylether	1236	-	-	-	0.18	-	0.62	-	-
Carvacrol methylether	1248	0.88	2.25	2.12	2.6	-	0.49	-	0.25
Thymoquinone	1253	0.34	-	0.6	0.29	1.14	-	0.52	0.74
2-Isopropyl-4-methylanisole	1264	-	0.1	-	-	-	-	-	-
Bornyl acetate	1285	-	0.07	0.14	0.13	-	-	-	-
Thymol	1298	-	8.55	0.32	5.24	11.41	42.41	14.3	41.47
Carvacrol	1313	-	28.1	7.69	28.9	1.45	5.15	1.52	5.71
3-Methyl-4-isopropylphenol	1334	-	-	-	0.49	-	-	-	-
1,5,5-Trimethyl-6-methylene-	1339	-	-	0.49	-	0.85	-	0.81	-
β -Bourbonene	1386	-	0.08	0.19	0.13	-	-	-	-
β -Elemene	1393	-	-	-	-	-	-	-	-
β -Caryophyllene	1429	2.18	3.93	3.87	3.99	8.93	6.73	8.27	6.69
β -Cubebene	1432	0.28	-	0.1	-	-	-	-	-
Aromandendrene	1442	-	0.17	-	0.09	-	-	-	0.46
α -Caryophyllene	1456	-	0.22	0.22	0.26	0.64	0.37	0.52	0.38
Alloaromadendrene	1464	-	0.1	-	0.16	0.11	0.4	-	0.09
3-Methyl-4-isopropylphenol	1474	4.65	-	-	-	-	-	-	-
Germacrene D	1484	-	0.46	0.43	0.49	-	-	-	-
Bicyclogermacrene	1498	0.42	0.92	0.51	0.89	0.88	-	0.8	-
Viridiflorene	1498	-	-	-	-	-	0.5	-	0.46
β -Bisabolene	1509	-	0.07	-	0.14	0.76	0.53	0.59	0.91
γ -Cadinene	1516	-	-	-	-	-	0.14	-	-
α -Amorphene	1516	-	0.15	-	0.22	-	-	-	-
Δ -Cadinene	1526	-	0.09	-	0.13	-	0.28	-	-
Cis- α -bisabolene	1543	-	0.29	-	0.75	0.78	0.8	0.72	1.04
Trans- α -bisabolene	1545	-	-	-	-	-	-	-	0.04
p-Tert-Butylcatechol	1572	-	-	-	-	-	-	-	0.66
Spathulenol	1584	-	1.26	-	1.57	-	0.93	-	1.01
α -farnesene	1588	-	-	-	-	-	-	-	-
Caryophyllene oxide	1589	-	1.47	-	2.13	-	2.56	-	2.54
α -Copaene	1620	-	-	-	0.14	-	-	-	-
Vulgarol B	1677	-	-	-	-	-	-	-	0.25
γ -Sitosterol	1876	-	-	-	-	-	-	-	1.13
Stigmast-5-en-3-ol	1889	-	-	-	-	-	-	-	0.36
β -Amyrin	2115	-	-	-	-	-	-	-	0.88
Phytol	2115	-	-	-	0.33	-	-	-	-
2,2'-Dioxo-(E)-3,3'-	2151	-	-	-	2.11	-	-	-	-
Pentacyclic Triterpene - Alcohol	2362	-	-	-	-	-	-	-	0.36
Eicosane	3011	-	-	-	0.09	-	-	-	-
Monoterpene hydrocarbons (%)	62.3	21	77.6	13.11	68.6	29.25	68.5	18.57	
Oxygenated monoterpenes (%)	27	63	16.95	65.56	16.48	54.43	20.3	54.07	
Sesquiterpene hydrocarbons (%)	9.98	6.48	5.32	7.39	12.1	9.75	10.9	10.07	
Oxygenated sesquiterpenes (%)	-	2.73	-	3.7	-	3.49	-	4.46	
Others	0.49	2.1	0	2.84	2.82	0	0	3.74	
Identified compounds (%)	99.8	95.4	99.87	92.6	100	96.9	99.8	89.91	
Identified compounds (N)	25	44	30	45	23	27	23	47	
Non-identified compounds (%)	0.15	4.6	0.13	7.4	0	3.1	0.16	9.09	
Non-identified compounds (N)	2	23	1	43	0	10	1	40	
Total compounds (N)	27	67	31	88	23	37	24	87	

Supplementary Figures



Supplementary Figure S1. The first ten principal components and percentages of attributed variation. The first two eigenvalues were used to construct the principal component analysis biplot (accounting for the 77.4 % of the cumulative percentage explained).



Supplementary Figure S2. Quality of representation (\cos^2) of the variables on factor map. Variables on the first five dimensions are displayed. Size and colour intensity correlate to a better representation of specific morphological traits.