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Variability of seed quality traits in a collection of Spanish landraces of confectionery sunflower

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Supplementary Table 1. Mean values for percentage of kernel, hundred-seed weight, hundred-kernel weight, seed oil content, kernel oil content, concentration of palmitic, stearic, oleic, and linoleic acids in the seed oil, total tocopherol content, concentration of α -tocopherol and β -tocopherol, squalene content, total phytosterol content, and concentration of the individual sterols campesterol, stigmasterol, Δ^7 -campesterol, clerosterol, β -sitosterol, Δ^5 -avenasterol, $\Delta^{5,24}$ -stigmastadienol, Δ^7 -stigmastenol, Δ^7 -avenasterol in 137 landraces of confectionery sunflower grown in 2011 and 2012 in Córdoba, Spain

Trait	NC094594	NC094595	NC094598	NC094599	NC094600	NC094601
Kernel (%)	62,45	53,42	60,20	56,04	58,59	60,95
Hundred-seed weight (g)	10,38	8,65	9,37	6,47	4,21	7,39
Hundred-kernel weight (g)	6,48	4,64	5,59	3,62	2,47	4,51
Seed oil content (%)	24,88	20,58	24,88	24,52	21,54	23,46
Kernel oil content (%)	39,68	38,46	41,42	43,77	36,83	38,50
Palmitic acid (% total fatty acids)	5,98	6,28	5,75	7,18	8,46	5,90
Stearic acid (% total fatty acids)	3,38	3,43	3,01	4,55	2,90	3,34
Oleic acid (% total fatty acids)	46,98	46,09	43,78	37,02	24,78	46,46
Linoleic acid (% total fatty acids)	43,65	44,20	47,46	51,25	63,87	44,31
Tocopherol content (mg kg ⁻¹)	239,13	261,97	254,59	250,31	265,75	359,79
α -tocopherol (% tocopherols)	98,26	97,97	97,44	97,42	98,91	97,56
β -tocopherol (% tocopherols)	1,74	2,03	2,56	1,95	0,59	1,95
Squalene content (mg kg ⁻¹)	37,48	36,77	71,01	47,38	63,14	46,26
Phytosterol content (mg kg ⁻¹)	1629,45	1961,60	1793,40	2258,16	2332,51	1851,80
Campesterol (% phytosterols)	8,82	5,47	6,81	6,83	4,35	9,81
Stigmasterol (% phytosterols)	7,55	9,17	8,30	6,52	8,15	11,37
Δ^7 -campesterol (% phytosterols)	1,36	1,32	1,98	1,25	1,99	0,91
Clerosterol (% phytosterols)	1,09	0,98	0,82	0,84	2,04	0,93
β -sitosterol (% phytosterols)	62,07	50,51	47,06	50,45	33,26	55,56
Δ^5 -avenasterol (% phytosterols)	1,35	3,13	3,14	4,92	2,45	2,04
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,12	2,59	3,21	2,98	5,03	1,98
Δ^7 -stigmastenol (% phytosterols)	13,93	23,64	24,74	21,33	35,23	13,45
Δ^7 -avenasterol (% phytosterols)	2,71	3,18	3,93	4,90	7,49	3,95

Supplementary Table 1 (continued).

Trait	NC094602	NC094603	NC094604	NC094606	NC094607	NC094608
Kernel (%)	53,58	45,18	51,37	56,78	57,20	59,35
Hundred-seed weight (g)	6,58	5,90	12,37	9,58	7,63	10,98
Hundred-kernel weight (g)	3,54	2,64	6,39	5,45	4,36	6,49
Seed oil content (%)	20,51	16,86	20,40	21,61	21,75	20,24
Kernel oil content (%)	38,24	37,61	39,68	38,06	38,10	34,13
Palmitic acid (% total fatty acids)	7,73	10,35	9,10	7,52	6,36	7,36
Stearic acid (% total fatty acids)	3,41	3,03	4,51	3,83	5,05	4,46
Oleic acid (% total fatty acids)	41,22	32,12	43,82	38,35	39,38	53,57
Linoleic acid (% total fatty acids)	47,65	54,47	42,56	50,31	49,21	34,60
Tocopherol content (mg kg ⁻¹)	130,80	135,44	165,92	285,96	187,03	176,09
α -tocopherol (% tocopherols)	97,21	98,18	98,06	98,68	98,38	97,90
β -tocopherol (% tocopherols)	1,40	1,82	1,94	0,92	1,09	1,59
Squalene content (mg kg ⁻¹)	107,70	23,55	17,20	24,94	26,07	32,67
Phytosterol content (mg kg ⁻¹)	2659,48	2533,99	1729,93	1920,49	1628,44	1688,18
Campesterol (% phytosterols)	7,11	10,05	7,60	10,94	10,08	6,23
Stigmasterol (% phytosterols)	6,79	6,97	8,05	7,73	8,22	10,98
Δ^7 -campesterol (% phytosterols)	2,20	3,68	1,45	1,50	1,35	1,51
Clerosterol (% phytosterols)	0,89	1,12	1,23	0,82	0,87	0,92
β -sitosterol (% phytosterols)	47,88	48,77	59,98	60,80	58,37	55,37
Δ^5 -avenasterol (% phytosterols)	1,60	1,04	1,44	1,99	1,25	1,79
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,62	1,35	1,49	0,57	1,05	1,00
Δ^7 -stigmastenol (% phytosterols)	24,75	22,24	16,24	12,22	16,10	18,21
Δ^7 -avenasterol (% phytosterols)	7,15	4,78	2,52	3,42	2,72	4,00

Supplementary Table 1 (continued).

Trait	NC094609	NC094611	NC094612	NC094613	NC094614	NC094615
Kernel (%)	64,86	59,42	54,23	63,17	51,28	58,98
Hundred-seed weight (g)	10,81	7,24	5,46	6,36	8,21	9,56
Hundred-kernel weight (g)	7,01	4,31	2,93	4,02	4,21	5,64
Seed oil content (%)	24,56	23,59	22,06	20,41	19,48	25,49
Kernel oil content (%)	37,94	39,72	41,08	32,31	38,02	43,18
Palmitic acid (% total fatty acids)	6,51	6,04	7,89	8,81	6,62	7,22
Stearic acid (% total fatty acids)	5,67	4,45	2,31	2,79	3,52	3,84
Oleic acid (% total fatty acids)	42,88	44,78	27,30	45,57	36,41	41,77
Linoleic acid (% total fatty acids)	44,94	44,72	62,49	42,83	53,45	47,17
Tocopherol content (mg kg ⁻¹)	278,49	179,78	233,24	269,31	200,16	267,50
α -tocopherol (% tocopherols)	98,03	97,06	98,69	97,79	97,74	96,88
β -tocopherol (% tocopherols)	1,69	2,40	0,85	1,90	1,74	2,48
Squalene content (mg kg ⁻¹)	50,16	28,17	48,04	30,25	34,04	57,64
Phytosterol content (mg kg ⁻¹)	1699,10	1840,73	2379,59	1706,96	2173,09	1718,62
Campesterol (% phytosterols)	7,58	5,40	4,74	6,69	9,58	7,88
Stigmasterol (% phytosterols)	7,73	8,49	7,94	8,84	6,70	7,40
Δ^7 -campesterol (% phytosterols)	2,84	1,11	2,10	1,17	2,07	2,61
Clerosterol (% phytosterols)	0,76	1,01	1,58	1,06	0,70	0,60
β -sitosterol (% phytosterols)	49,90	58,98	42,87	59,26	56,86	56,21
Δ^5 -avenasterol (% phytosterols)	2,44	2,60	1,24	1,72	3,49	1,74
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,92	1,18	1,45	1,07	0,98	1,26
Δ^7 -stigmastenol (% phytosterols)	22,35	18,08	32,86	17,78	14,78	18,96
Δ^7 -avenasterol (% phytosterols)	4,48	3,14	5,22	2,41	4,84	3,34

Supplementary Table 1 (continued).

Trait	NC094616	NC094617	NC094619	NC094620	NC094621	NC094623
Kernel (%)	59,02	56,37	56,77	56,55	51,83	54,68
Hundred-seed weight (g)	8,41	9,40	11,53	7,60	9,93	13,42
Hundred-kernel weight (g)	4,98	5,28	6,54	4,30	5,08	7,39
Seed oil content (%)	24,95	24,30	25,30	22,02	18,77	22,98
Kernel oil content (%)	42,27	43,07	44,60	38,88	36,40	42,08
Palmitic acid (% total fatty acids)	6,78	8,37	7,72	6,42	7,07	9,64
Stearic acid (% total fatty acids)	3,74	3,18	3,67	3,69	2,93	3,62
Oleic acid (% total fatty acids)	39,50	30,77	46,47	41,32	34,76	31,68
Linoleic acid (% total fatty acids)	49,98	57,68	42,12	48,58	55,16	54,76
Tocopherol content (mg kg ⁻¹)	383,05	243,62	146,39	233,52	304,71	145,02
α -tocopherol (% tocopherols)	96,78	98,67	97,79	98,90	97,99	99,07
β -tocopherol (% tocopherols)	2,97	1,02	1,79	0,84	1,63	0,93
Squalene content (mg kg ⁻¹)	43,71	32,09	32,80	24,71	21,13	32,08
Phytosterol content (mg kg ⁻¹)	1823,48	2035,43	2044,80	1553,32	1565,42	1704,71
Campesterol (% phytosterols)	8,36	8,62	10,84	7,66	8,07	9,98
Stigmasterol (% phytosterols)	9,10	6,40	9,81	9,69	7,93	8,05
Δ^7 -campesterol (% phytosterols)	1,47	2,06	1,12	1,75	1,30	1,30
Clerosterol (% phytosterols)	0,79	1,10	0,89	0,74	0,92	0,89
β -sitosterol (% phytosterols)	58,14	57,69	61,75	57,56	66,13	63,44
Δ^5 -avenasterol (% phytosterols)	2,22	0,87	0,98	2,13	2,40	1,38
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,05	0,64	0,53	0,40	0,48	0,92
Δ^7 -stigmastenol (% phytosterols)	14,81	19,45	12,40	16,47	10,29	12,05
Δ^7 -avenasterol (% phytosterols)	4,07	3,17	1,68	3,60	2,48	1,98

Supplementary Table 1 (continued).

Trait	NC094624	NC094625	NC094626	NC094627	NC094628	NC094629
Kernel (%)	53,04	58,98	56,76	55,14	49,80	49,58
Hundred-seed weight (g)	10,93	8,73	12,18	6,56	6,43	10,62
Hundred-kernel weight (g)	5,80	5,17	6,93	3,62	3,19	5,25
Seed oil content (%)	23,68	24,17	22,96	23,33	22,18	21,10
Kernel oil content (%)	44,65	40,95	40,43	42,42	44,88	42,61
Palmitic acid (% total fatty acids)	7,46	8,25	6,92	6,47	6,59	7,53
Stearic acid (% total fatty acids)	3,65	4,14	3,51	5,11	4,76	5,82
Oleic acid (% total fatty acids)	47,07	34,10	36,59	45,22	37,93	39,54
Linoleic acid (% total fatty acids)	41,68	53,37	52,83	43,20	50,73	47,10
Tocopherol content (mg kg ⁻¹)	187,58	191,88	272,92	178,80	404,31	224,03
α -tocopherol (% tocopherols)	98,68	97,35	98,67	98,89	98,55	98,37
β -tocopherol (% tocopherols)	1,32	2,65	1,33	1,11	1,45	1,63
Squalene content (mg kg ⁻¹)	24,38	11,98	47,39	18,80	20,72	26,86
Phytosterol content (mg kg ⁻¹)	1909,24	1343,95	1499,09	2183,91	1971,60	1917,68
Campesterol (% phytosterols)	9,07	7,55	10,71	9,25	7,24	9,25
Stigmasterol (% phytosterols)	6,00	6,95	7,16	7,40	9,39	8,57
Δ^7 -campesterol (% phytosterols)	1,38	1,61	1,20	2,96	1,09	1,85
Clerosterol (% phytosterols)	0,87	1,11	1,00	0,49	0,76	0,76
β -sitosterol (% phytosterols)	61,67	60,88	64,61	49,25	60,68	56,17
Δ^5 -avenasterol (% phytosterols)	1,86	1,85	1,70	1,33	1,36	2,30
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,92	0,46	1,01	1,51	0,99	1,08
Δ^7 -stigmastenol (% phytosterols)	16,10	16,47	10,62	23,21	15,13	16,27
Δ^7 -avenasterol (% phytosterols)	2,11	3,11	1,98	4,61	3,37	3,75

Supplementary Table 1 (continued).

Trait	NC094630	NC094631	NC094632	NC094633	NC094635	NC094636
Kernel (%)	55,26	60,95	55,15	59,19	59,80	54,80
Hundred-seed weight (g)	11,89	8,67	8,19	4,96	9,56	6,73
Hundred-kernel weight (g)	6,57	5,27	4,55	2,94	5,71	3,67
Seed oil content (%)	24,90	24,24	23,26	22,98	24,22	22,32
Kernel oil content (%)	45,05	39,72	42,41	38,82	40,38	40,70
Palmitic acid (% total fatty acids)	7,32	7,50	6,33	7,06	7,16	7,56
Stearic acid (% total fatty acids)	1,92	3,52	3,17	2,93	2,67	2,64
Oleic acid (% total fatty acids)	44,75	41,76	44,53	24,01	44,76	36,91
Linoleic acid (% total fatty acids)	45,92	47,14	45,94	66,00	45,38	52,85
Tocopherol content (mg kg ⁻¹)	326,06	227,28	322,15	412,51	166,74	306,04
α -tocopherol (% tocopherols)	99,42	98,14	98,47	98,80	98,48	98,80
β -tocopherol (% tocopherols)	0,51	1,86	1,53	1,20	1,52	1,20
Squalene content (mg kg ⁻¹)	29,00	34,55	27,48	16,59	51,12	25,20
Phytosterol content (mg kg ⁻¹)	1757,65	1597,91	1844,18	1964,81	1857,18	2436,09
Campesterol (% phytosterols)	8,14	11,39	8,92	11,38	8,16	8,25
Stigmasterol (% phytosterols)	7,83	7,87	12,10	8,91	9,48	5,50
Δ^7 -campesterol (% phytosterols)	1,64	1,10	1,37	1,61	1,46	1,97
Clerosterol (% phytosterols)	0,61	0,85	0,69	0,63	0,91	0,64
β -sitosterol (% phytosterols)	58,53	62,89	52,48	60,47	56,51	55,01
Δ^5 -avenasterol (% phytosterols)	2,29	2,12	1,78	1,62	3,38	2,11
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,96	0,70	0,92	0,57	0,59	1,62
Δ^7 -stigmastenol (% phytosterols)	16,16	10,57	18,28	11,04	16,43	21,64
Δ^7 -avenasterol (% phytosterols)	3,83	2,53	3,46	3,77	3,08	3,26

Supplementary Table 1 (continued).

Trait	NC094637	NC094640	NC094641	NC094642	NC094643	NC094644
Kernel (%)	43,61	54,86	50,06	60,53	50,73	47,45
Hundred-seed weight (g)	5,54	8,57	10,24	5,51	7,97	11,56
Hundred-kernel weight (g)	2,42	4,90	5,09	3,36	4,10	5,42
Seed oil content (%)	15,98	24,85	19,40	24,11	19,29	20,69
Kernel oil content (%)	36,57	45,73	38,79	39,77	38,37	43,65
Palmitic acid (% total fatty acids)	8,12	6,39	7,41	7,36	9,36	6,46
Stearic acid (% total fatty acids)	5,83	3,19	2,47	5,33	3,13	3,51
Oleic acid (% total fatty acids)	44,38	41,95	40,41	44,51	26,41	33,33
Linoleic acid (% total fatty acids)	41,67	48,47	49,62	42,80	61,07	56,70
Tocopherol content (mg kg ⁻¹)	211,98	264,05	256,17	264,82	244,05	235,16
α -tocopherol (% tocopherols)	99,02	97,72	96,83	98,54	99,36	98,98
β -tocopherol (% tocopherols)	0,98	2,28	3,17	1,46	0,64	1,02
Squalene content (mg kg ⁻¹)	13,60	36,01	22,97	22,40	20,31	37,42
Phytosterol content (mg kg ⁻¹)	2267,79	1652,73	1953,90	2313,86	1662,05	1685,13
Campesterol (% phytosterols)	9,05	12,45	9,38	9,79	6,77	17,11
Stigmasterol (% phytosterols)	8,02	6,80	7,22	11,22	6,86	7,83
Δ^7 -campesterol (% phytosterols)	1,71	1,89	1,80	1,06	1,56	1,53
Clerosterol (% phytosterols)	0,48	0,53	0,63	0,61	0,80	0,67
β -sitosterol (% phytosterols)	56,08	52,18	57,06	55,62	60,20	54,52
Δ^5 -avenasterol (% phytosterols)	2,16	5,26	2,91	1,74	1,87	2,45
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,22	0,87	0,84	1,10	0,92	0,77
Δ^7 -stigmastenol (% phytosterols)	17,99	15,36	16,16	15,96	18,20	12,51
Δ^7 -avenasterol (% phytosterols)	3,29	4,65	3,99	2,90	2,83	2,61

Supplementary Table 1 (continued).

Trait	NC094645	NC094646	NC094647	NC094648	NC094649	NC094650
Kernel (%)	54,90	58,52	46,40	59,71	64,77	58,76
Hundred-seed weight (g)	7,69	10,49	9,69	8,70	8,47	4,61
Hundred-kernel weight (g)	4,21	6,15	4,49	5,19	5,47	2,71
Seed oil content (%)	19,16	22,38	18,55	23,24	29,78	22,50
Kernel oil content (%)	35,08	38,21	39,97	38,94	46,01	38,24
Palmitic acid (% total fatty acids)	7,29	6,37	6,98	6,76	5,55	7,02
Stearic acid (% total fatty acids)	4,98	4,35	3,38	3,48	5,02	4,24
Oleic acid (% total fatty acids)	38,87	42,70	30,35	38,37	46,80	36,67
Linoleic acid (% total fatty acids)	48,87	46,57	59,30	51,35	42,63	52,07
Tocopherol content (mg kg ⁻¹)	216,69	190,11	384,95	240,82	271,49	349,06
α -tocopherol (% tocopherols)	99,08	98,47	98,47	97,17	97,19	98,48
β -tocopherol (% tocopherols)	0,92	1,53	1,44	2,83	2,81	1,52
Squalene content (mg kg ⁻¹)	19,15	39,93	32,10	26,28	97,45	18,90
Phytosterol content (mg kg ⁻¹)	1976,53	1910,86	2125,13	2313,69	2183,69	2026,63
Campesterol (% phytosterols)	8,69	7,53	12,10	10,30	11,44	7,33
Stigmasterol (% phytosterols)	9,56	8,69	10,34	9,51	8,50	14,05
Δ^7 -campesterol (% phytosterols)	1,45	2,09	1,29	1,60	1,80	2,20
Clerosterol (% phytosterols)	1,09	0,90	0,57	0,73	0,76	0,32
β -sitosterol (% phytosterols)	56,04	51,41	58,33	57,76	53,35	48,66
Δ^5 -avenasterol (% phytosterols)	1,54	3,23	3,49	2,53	4,86	1,31
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,15	1,52	0,52	0,95	1,09	0,21
Δ^7 -stigmastenol (% phytosterols)	17,72	21,26	9,66	13,78	15,15	22,31
Δ^7 -avenasterol (% phytosterols)	2,76	3,37	3,71	2,85	3,04	3,63

Supplementary Table 1 (continued).

Trait	NC094651	NC094652	NC094653	NC094654	NC094656	NC094657
Kernel (%)	51,79	53,59	58,64	47,78	51,93	68,05
Hundred-seed weight (g)	9,55	8,29	7,19	6,24	7,74	7,57
Hundred-kernel weight (g)	4,95	4,45	4,22	2,98	4,13	5,14
Seed oil content (%)	21,57	22,62	22,73	22,18	22,71	29,56
Kernel oil content (%)	41,56	42,40	38,76	46,32	44,45	43,40
Palmitic acid (% total fatty acids)	6,48	6,92	6,90	8,73	7,51	7,88
Stearic acid (% total fatty acids)	1,64	5,15	4,45	2,57	4,09	3,29
Oleic acid (% total fatty acids)	37,88	44,81	49,49	23,77	24,74	29,39
Linoleic acid (% total fatty acids)	54,00	43,12	39,16	64,92	63,67	59,34
Tocopherol content (mg kg ⁻¹)	220,14	201,03	282,18	243,13	423,15	206,20
α -tocopherol (% tocopherols)	97,98	98,70	98,78	98,84	97,77	98,12
β -tocopherol (% tocopherols)	2,02	1,30	1,22	0,89	2,06	1,88
Squalene content (mg kg ⁻¹)	28,13	43,98	26,35	45,49	15,09	20,02
Phytosterol content (mg kg ⁻¹)	2091,57	1799,68	1968,77	2018,84	2121,35	2608,64
Campesterol (% phytosterols)	10,75	8,91	9,72	5,63	10,81	11,03
Stigmasterol (% phytosterols)	8,41	7,43	10,26	8,75	9,07	6,76
Δ^7 -campesterol (% phytosterols)	2,19	1,62	1,59	1,90	2,34	1,93
Clerosterol (% phytosterols)	0,57	0,78	0,87	1,01	0,69	0,57
β -sitosterol (% phytosterols)	49,25	53,53	53,74	47,57	56,55	60,55
Δ^5 -avenasterol (% phytosterols)	2,90	5,03	2,18	1,31	1,51	1,83
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,15	1,16	0,94	1,54	0,38	0,46
Δ^7 -stigmastenol (% phytosterols)	21,03	17,60	16,16	27,46	14,78	14,11
Δ^7 -avenasterol (% phytosterols)	3,74	3,95	4,53	4,83	3,87	2,76

Supplementary Table 1 (continued).

Trait	NC094658	NC094659	NC094661	NC094662	NC094663	NC094664
Kernel (%)	49,02	56,73	52,70	58,20	48,11	57,55
Hundred-seed weight (g)	7,16	10,08	10,13	9,50	10,62	5,11
Hundred-kernel weight (g)	3,49	5,70	5,34	5,50	5,29	2,93
Seed oil content (%)	22,28	24,22	19,97	22,48	22,23	21,38
Kernel oil content (%)	45,41	42,62	37,90	38,69	46,01	37,12
Palmitic acid (% total fatty acids)	6,53	8,57	7,44	7,44	6,93	7,79
Stearic acid (% total fatty acids)	3,91	3,06	4,56	2,91	3,67	2,69
Oleic acid (% total fatty acids)	35,36	33,72	35,89	37,02	45,65	31,88
Linoleic acid (% total fatty acids)	54,20	54,50	51,99	52,63	43,61	57,64
Tocopherol content (mg kg ⁻¹)	245,73	236,76	199,91	280,32	178,82	270,19
α -tocopherol (% tocopherols)	96,75	98,58	99,58	96,09	96,86	99,02
β -tocopherol (% tocopherols)	3,25	1,42	0,42	3,91	1,48	0,98
Squalene content (mg kg ⁻¹)	28,17	53,71	34,05	33,76	39,82	33,90
Phytosterol content (mg kg ⁻¹)	1997,95	2213,90	1828,27	1850,61	2229,14	1892,78
Campesterol (% phytosterols)	9,34	7,26	9,05	8,66	7,47	5,48
Stigmasterol (% phytosterols)	7,37	6,51	8,27	7,58	7,40	9,33
Δ^7 -campesterol (% phytosterols)	2,24	1,37	1,19	1,01	1,39	2,01
Clerosterol (% phytosterols)	0,52	1,00	0,81	0,76	0,92	1,29
β -sitosterol (% phytosterols)	55,02	62,63	61,26	61,50	59,96	50,73
Δ^5 -avenasterol (% phytosterols)	2,24	1,34	1,55	2,32	2,28	2,22
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,84	1,43	0,87	1,26	1,18	0,84
Δ^7 -stigmastenol (% phytosterols)	18,78	15,82	13,67	14,15	16,87	24,14
Δ^7 -avenasterol (% phytosterols)	3,64	2,64	3,31	2,76	2,53	3,95

Supplementary Table 1 (continued).

Trait	NC094665	NC094667	NC094670	NC094671	NC094672	NC094673
Kernel (%)	57,50	50,00	59,15	55,39	59,35	58,35
Hundred-seed weight (g)	9,06	11,57	12,14	14,74	14,72	12,73
Hundred-kernel weight (g)	5,24	5,79	7,26	8,24	8,77	7,40
Seed oil content (%)	20,72	21,57	22,40	21,94	20,02	22,66
Kernel oil content (%)	36,02	43,18	37,82	39,60	33,53	38,76
Palmitic acid (% total fatty acids)	6,58	6,65	6,27	6,37	6,05	6,18
Stearic acid (% total fatty acids)	3,91	3,74	4,87	3,41	3,63	2,94
Oleic acid (% total fatty acids)	40,39	49,63	45,70	45,55	32,98	38,47
Linoleic acid (% total fatty acids)	49,05	39,94	43,16	44,68	57,33	52,41
Tocopherol content (mg kg ⁻¹)	219,87	183,27	184,49	224,00	267,26	311,66
α -tocopherol (% tocopherols)	98,56	97,45	99,35	98,38	96,75	98,55
β -tocopherol (% tocopherols)	1,44	2,15	0,65	1,62	3,25	1,45
Squalene content (mg kg ⁻¹)	18,19	41,62	36,06	47,85	43,60	54,88
Phytosterol content (mg kg ⁻¹)	1574,15	2274,41	1966,58	1435,74	1382,69	1479,82
Campesterol (% phytosterols)	10,98	7,94	12,91	9,05	12,92	7,24
Stigmasterol (% phytosterols)	8,18	8,28	6,43	7,47	7,14	8,16
Δ^7 -campesterol (% phytosterols)	1,33	1,78	2,29	1,92	1,06	1,47
Clerosterol (% phytosterols)	0,71	1,63	1,79	0,99	0,70	1,34
β -sitosterol (% phytosterols)	57,02	60,20	58,58	56,17	60,03	58,43
Δ^5 -avenasterol (% phytosterols)	3,23	2,38	2,87	4,48	3,59	6,22
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,38	0,87	1,07	1,26	1,27	0,99
Δ^7 -stigmastenol (% phytosterols)	14,48	14,25	11,77	15,55	10,71	12,31
Δ^7 -avenasterol (% phytosterols)	2,68	2,66	2,28	3,11	2,59	3,83

Supplementary Table 1 (continued).

Trait	NC094674	NC094675	NC094677	NC094678	NC094679	NC094680
Kernel (%)	55,21	54,78	53,08	59,31	45,43	47,75
Hundred-seed weight (g)	11,24	11,58	13,56	12,92	13,97	13,26
Hundred-kernel weight (g)	6,21	6,24	7,29	7,66	6,36	6,36
Seed oil content (%)	21,90	22,58	20,69	26,26	18,81	18,74
Kernel oil content (%)	39,67	41,29	38,91	44,29	41,40	39,18
Palmitic acid (% total fatty acids)	5,89	7,20	6,20	7,01	6,72	8,10
Stearic acid (% total fatty acids)	3,57	3,90	2,55	4,17	4,84	5,02
Oleic acid (% total fatty acids)	43,75	40,83	40,07	42,93	42,08	35,07
Linoleic acid (% total fatty acids)	46,79	48,05	51,14	45,83	46,36	51,81
Tocopherol content (mg kg ⁻¹)	310,27	311,76	221,80	206,49	176,47	261,68
α -tocopherol (% tocopherols)	97,94	97,15	98,90	98,03	99,25	99,30
β -tocopherol (% tocopherols)	2,06	2,85	1,10	1,97	0,75	0,70
Squalene content (mg kg ⁻¹)	100,01	35,66	30,48	35,39	23,32	20,53
Phytosterol content (mg kg ⁻¹)	2205,01	1620,24	1453,21	1762,44	1783,27	1801,03
Campesterol (% phytosterols)	9,88	9,77	11,24	8,08	7,65	6,68
Stigmasterol (% phytosterols)	7,11	9,80	9,28	6,66	7,80	7,35
Δ^7 -campesterol (% phytosterols)	2,90	1,43	1,15	1,30	1,01	1,22
Clerosterol (% phytosterols)	1,35	1,46	1,12	0,66	1,38	1,41
β -sitosterol (% phytosterols)	52,90	57,04	58,63	60,41	60,14	58,94
Δ^5 -avenasterol (% phytosterols)	3,13	2,38	2,71	2,77	2,70	5,97
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,39	1,39	1,29	0,73	1,35	0,77
Δ^7 -stigmastenol (% phytosterols)	17,29	13,88	11,93	16,81	15,03	14,18
Δ^7 -avenasterol (% phytosterols)	4,05	2,85	2,66	2,57	2,93	3,47

Supplementary Table 1 (continued).

Trait	NC094682	NC094683	NC094684	NC094685	NC094686	NC094687
Kernel (%)	52,49	51,55	54,17	48,97	61,50	47,70
Hundred-seed weight (g)	10,62	15,71	11,00	14,84	10,65	10,30
Hundred-kernel weight (g)	5,58	7,96	5,93	7,23	6,51	4,90
Seed oil content (%)	23,70	22,20	22,86	23,03	23,52	21,93
Kernel oil content (%)	45,16	43,32	42,14	46,98	38,22	45,97
Palmitic acid (% total fatty acids)	7,18	6,42	7,52	8,14	7,84	5,81
Stearic acid (% total fatty acids)	3,36	2,97	4,29	4,28	4,17	5,43
Oleic acid (% total fatty acids)	40,59	44,57	38,68	38,12	38,42	47,77
Linoleic acid (% total fatty acids)	48,83	45,95	49,47	49,42	49,57	41,00
Tocopherol content (mg kg ⁻¹)	164,94	139,73	172,91	224,20	220,15	225,34
α -tocopherol (% tocopherols)	99,02	98,78	99,11	97,89	98,46	97,95
β -tocopherol (% tocopherols)	0,98	1,22	0,89	2,11	1,54	2,05
Squalene content (mg kg ⁻¹)	44,50	44,11	44,73	57,95	28,45	22,89
Phytosterol content (mg kg ⁻¹)	2445,67	2115,45	1477,05	1583,77	1570,61	1591,79
Campesterol (% phytosterols)	9,02	8,42	14,29	15,41	4,98	5,44
Stigmasterol (% phytosterols)	6,23	5,74	8,51	7,19	7,01	8,38
Δ^7 -campesterol (% phytosterols)	1,06	1,42	1,14	1,55	0,53	1,38
Clerosterol (% phytosterols)	1,30	0,98	0,94	0,76	0,99	0,82
β -sitosterol (% phytosterols)	58,24	61,68	54,54	56,93	52,09	51,55
Δ^5 -avenasterol (% phytosterols)	3,49	3,52	5,40	3,22	6,21	3,44
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,78	1,05	1,13	0,44	2,02	0,96
Δ^7 -stigmastenol (% phytosterols)	15,92	15,20	12,02	12,78	22,09	23,85
Δ^7 -avenasterol (% phytosterols)	2,97	1,98	2,03	1,74	4,07	4,18

Supplementary Table 1 (continued).

Trait	NC094688	NC094689	NC094690	NC094691	NC094692	NC094693
Kernel (%)	54,11	51,22	54,00	52,33	47,23	48,98
Hundred-seed weight (g)	13,20	14,53	13,50	12,03	12,76	15,34
Hundred-kernel weight (g)	7,14	7,46	7,33	6,40	6,15	7,53
Seed oil content (%)	23,62	22,92	24,97	22,22	20,48	20,84
Kernel oil content (%)	43,65	44,78	46,32	42,76	44,08	42,58
Palmitic acid (% total fatty acids)	7,66	6,86	5,92	5,99	6,64	6,82
Stearic acid (% total fatty acids)	2,60	3,43	3,94	4,69	4,33	4,10
Oleic acid (% total fatty acids)	36,19	40,40	47,46	41,75	42,70	43,79
Linoleic acid (% total fatty acids)	53,45	49,30	42,60	47,54	46,32	45,29
Tocopherol content (mg kg ⁻¹)	170,44	156,93	207,57	210,55	192,29	288,28
α -tocopherol (% tocopherols)	99,28	99,38	98,71	98,54	99,13	98,95
β -tocopherol (% tocopherols)	0,72	0,62	1,29	1,46	0,87	1,05
Squalene content (mg kg ⁻¹)	53,60	57,80	55,04	69,81	58,42	73,40
Phytosterol content (mg kg ⁻¹)	2379,10	2178,74	2174,81	2649,68	1543,98	1837,83
Campesterol (% phytosterols)	7,19	7,67	7,46	8,25	7,67	9,61
Stigmasterol (% phytosterols)	5,88	6,99	7,42	6,36	9,03	7,21
Δ^7 -campesterol (% phytosterols)	1,78	1,11	1,38	1,52	1,13	1,56
Clerosterol (% phytosterols)	0,93	1,14	0,78	0,42	0,90	1,06
β -sitosterol (% phytosterols)	61,36	62,20	57,77	56,62	56,67	56,38
Δ^5 -avenasterol (% phytosterols)	1,30	4,66	5,94	6,07	4,79	5,61
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,37	1,25	1,14	1,20	0,61	1,53
Δ^7 -stigmastenol (% phytosterols)	18,10	12,58	15,18	16,15	15,13	13,04
Δ^7 -avenasterol (% phytosterols)	2,08	2,39	2,94	3,40	4,06	4,00

Supplementary Table 1 (continued).

Trait	NC094694	NC094695	NC094696	NC094697	NC094698	NC094699
Kernel (%)	54,00	54,60	54,04	62,47	56,10	51,48
Hundred-seed weight (g)	12,45	12,67	12,79	11,22	11,95	12,45
Hundred-kernel weight (g)	6,72	6,92	7,01	6,99	6,77	6,41
Seed oil content (%)	22,97	23,24	20,61	24,40	21,27	21,36
Kernel oil content (%)	42,61	42,65	38,27	38,98	38,07	41,50
Palmitic acid (% total fatty acids)	6,23	6,96	6,57	6,38	7,46	7,46
Stearic acid (% total fatty acids)	3,24	3,67	4,57	4,06	3,50	3,69
Oleic acid (% total fatty acids)	47,06	43,06	44,49	50,44	32,19	38,78
Linoleic acid (% total fatty acids)	43,38	46,18	44,34	39,10	56,75	50,08
Tocopherol content (mg kg ⁻¹)	177,39	171,85	262,72	269,32	147,93	239,19
α -tocopherol (% tocopherols)	99,32	98,86	97,65	96,25	98,39	99,18
β -tocopherol (% tocopherols)	0,68	1,14	2,35	3,75	1,61	0,82
Squalene content (mg kg ⁻¹)	50,49	40,27	32,48	38,16	22,47	40,41
Phytosterol content (mg kg ⁻¹)	1975,33	2199,62	2094,95	1560,07	2030,92	2054,80
Campesterol (% phytosterols)	8,51	9,20	11,98	8,94	10,73	8,57
Stigmasterol (% phytosterols)	7,70	7,58	8,51	9,00	6,80	7,91
Δ^7 -campesterol (% phytosterols)	1,43	1,25	1,50	2,74	1,40	1,54
Clerosterol (% phytosterols)	1,70	0,94	0,89	1,65	0,64	0,97
β -sitosterol (% phytosterols)	58,46	60,49	61,11	53,23	56,96	57,59
Δ^5 -avenasterol (% phytosterols)	2,68	2,44	1,98	5,62	3,22	4,85
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,51	2,07	0,72	1,41	1,37	1,21
Δ^7 -stigmastenol (% phytosterols)	15,57	13,68	10,55	14,61	15,11	13,61
Δ^7 -avenasterol (% phytosterols)	2,45	2,34	2,75	2,81	3,76	3,73

Supplementary Table 1 (continued).

Trait	NC094700	NC094702	NC094704	NC094705	NC094706	NC094707
Kernel (%)	57,73	54,29	52,12	54,48	54,17	47,10
Hundred-seed weight (g)	8,62	11,81	10,71	11,74	11,49	10,88
Hundred-kernel weight (g)	4,97	6,40	5,61	6,39	6,23	5,21
Seed oil content (%)	22,12	23,26	24,88	23,66	23,65	20,48
Kernel oil content (%)	38,32	42,82	47,89	43,42	43,64	43,51
Palmitic acid (% total fatty acids)	6,68	6,60	6,68	6,17	5,72	7,93
Stearic acid (% total fatty acids)	3,89	1,89	2,98	2,74	4,48	2,96
Oleic acid (% total fatty acids)	34,13	63,91	40,05	54,43	43,51	38,71
Linoleic acid (% total fatty acids)	55,26	27,24	50,25	36,67	46,30	50,30
Tocopherol content (mg kg ⁻¹)	191,82	161,33	215,57	241,64	286,66	167,49
α -tocopherol (% tocopherols)	98,72	99,03	98,33	98,00	97,95	98,23
β -tocopherol (% tocopherols)	1,28	0,97	1,67	2,00	2,05	1,77
Squalene content (mg kg ⁻¹)	39,97	99,08	29,03	59,52	26,68	34,09
Phytosterol content (mg kg ⁻¹)	1803,29	2942,51	1490,10	1568,18	1831,86	1600,75
Campesterol (% phytosterols)	9,36	9,70	8,83	12,25	8,90	8,70
Stigmasterol (% phytosterols)	8,73	4,99	8,66	7,64	7,24	7,22
Δ^7 -campesterol (% phytosterols)	1,16	2,05	1,30	1,25	2,04	1,13
Clerosterol (% phytosterols)	0,77	0,82	0,82	0,76	0,73	0,88
β -sitosterol (% phytosterols)	57,69	58,06	61,31	55,83	56,78	65,37
Δ^5 -avenasterol (% phytosterols)	2,27	2,41	1,05	4,25	2,15	0,96
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,09	1,46	1,37	1,14	1,24	0,89
Δ^7 -stigmastenol (% phytosterols)	15,15	16,43	14,38	13,18	17,48	13,07
Δ^7 -avenasterol (% phytosterols)	3,80	4,08	2,27	3,70	3,45	1,76

Supplementary Table 1 (continued).

Trait	NC094709	NC094711	NC094712	NC094713	NC094714	NC094716
Kernel (%)	46,28	53,47	55,83	57,55	54,78	51,41
Hundred-seed weight (g)	14,08	15,60	12,59	9,51	13,72	13,84
Hundred-kernel weight (g)	6,55	8,39	6,99	5,48	7,53	7,10
Seed oil content (%)	19,02	23,30	24,74	20,70	23,30	21,28
Kernel oil content (%)	41,10	43,56	44,45	35,85	42,52	41,40
Palmitic acid (% total fatty acids)	8,80	7,26	6,15	7,69	6,69	6,92
Stearic acid (% total fatty acids)	4,10	4,07	2,59	3,04	5,05	3,71
Oleic acid (% total fatty acids)	24,21	40,94	40,68	39,21	32,49	43,27
Linoleic acid (% total fatty acids)	62,78	47,60	50,54	50,05	55,71	46,10
Tocopherol content (mg kg ⁻¹)	164,91	204,51	268,62	231,47	213,64	260,06
α -tocopherol (% tocopherols)	99,28	99,04	98,07	98,31	97,96	97,33
β -tocopherol (% tocopherols)	0,72	0,96	1,93	1,69	2,04	2,67
Squalene content (mg kg ⁻¹)	55,82	22,13	28,64	32,15	31,86	124,10
Phytosterol content (mg kg ⁻¹)	2264,99	1440,83	1990,75	1628,50	1869,10	1501,76
Campesterol (% phytosterols)	10,08	13,43	14,24	8,10	12,40	11,72
Stigmasterol (% phytosterols)	5,26	8,04	7,54	5,76	8,57	6,70
Δ^7 -campesterol (% phytosterols)	1,50	1,10	1,38	1,67	1,00	2,09
Clerosterol (% phytosterols)	0,97	0,72	0,93	1,52	0,67	0,59
β -sitosterol (% phytosterols)	60,68	57,58	57,96	59,31	62,08	54,34
Δ^5 -avenasterol (% phytosterols)	3,93	1,70	1,69	2,72	2,92	3,53
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,56	1,13	0,93	1,19	0,42	1,21
Δ^7 -stigmastenol (% phytosterols)	11,79	12,57	12,22	15,60	9,72	14,95
Δ^7 -avenasterol (% phytosterols)	4,24	3,72	3,10	4,13	2,23	4,88

Supplementary Table 1 (continued).

Trait	NC094717	NC094718	NC094721	NC094723	NC094724	NC094725
Kernel (%)	56,13	53,42	54,74	55,55	54,49	49,24
Hundred-seed weight (g)	11,01	11,83	7,07	7,37	8,72	10,38
Hundred-kernel weight (g)	6,18	6,33	3,82	4,09	4,74	5,10
Seed oil content (%)	21,91	18,02	17,82	22,87	22,13	21,73
Kernel oil content (%)	39,04	33,72	32,56	41,24	40,61	44,22
Palmitic acid (% total fatty acids)	6,05	6,78	8,83	7,28	7,23	9,27
Stearic acid (% total fatty acids)	2,78	4,45	3,73	2,96	4,48	3,96
Oleic acid (% total fatty acids)	48,05	41,17	31,95	23,03	41,24	38,59
Linoleic acid (% total fatty acids)	43,12	47,57	55,31	66,74	47,03	48,13
Tocopherol content (mg kg ⁻¹)	201,68	178,96	163,18	415,30	305,78	162,85
α -tocopherol (% tocopherols)	97,01	98,50	98,94	98,43	98,15	97,33
β -tocopherol (% tocopherols)	2,99	1,50	1,06	1,37	1,85	2,67
Squalene content (mg kg ⁻¹)	29,67	40,58	33,16	19,32	31,31	56,19
Phytosterol content (mg kg ⁻¹)	1772,45	1862,72	2033,69	2182,52	1844,14	2125,88
Campesterol (% phytosterols)	9,77	9,49	11,29	10,94	8,25	10,36
Stigmasterol (% phytosterols)	8,90	7,66	8,03	8,67	9,92	5,18
Δ^7 -campesterol (% phytosterols)	1,29	1,71	2,07	1,44	1,31	1,91
Clerosterol (% phytosterols)	0,80	0,77	0,77	0,52	0,58	0,64
β -sitosterol (% phytosterols)	59,09	58,59	56,20	59,29	57,71	61,38
Δ^5 -avenasterol (% phytosterols)	2,13	2,20	1,06	3,20	3,96	1,54
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	1,24	0,73	1,06	0,96	0,59	0,72
Δ^7 -stigmastenol (% phytosterols)	14,52	15,54	16,26	11,29	14,40	16,11
Δ^7 -avenasterol (% phytosterols)	2,26	3,31	3,26	3,70	3,29	2,15

Supplementary Table 1 (continued).

Trait	NC094726	NC094727	NC094728	NC094729	NC094730	NC094731
Kernel (%)	55,07	60,18	46,87	63,09	54,25	61,35
Hundred-seed weight (g)	9,38	9,68	12,99	11,47	8,59	7,59
Hundred-kernel weight (g)	5,17	5,83	6,10	7,24	4,65	4,66
Seed oil content (%)	23,39	20,32	21,66	21,28	25,10	25,22
Kernel oil content (%)	42,51	33,77	46,24	33,77	46,28	41,11
Palmitic acid (% total fatty acids)	8,72	6,98	7,62	8,06	6,27	8,24
Stearic acid (% total fatty acids)	3,16	2,78	3,24	3,75	3,40	3,64
Oleic acid (% total fatty acids)	43,13	31,23	41,80	32,47	44,51	48,01
Linoleic acid (% total fatty acids)	44,96	59,00	47,34	55,69	45,79	40,03
Tocopherol content (mg kg ⁻¹)	149,61	161,60	310,09	294,26	281,53	173,16
α -tocopherol (% tocopherols)	99,17	99,05	96,42	99,18	97,83	98,79
β -tocopherol (% tocopherols)	0,72	0,95	3,58	0,82	2,17	1,21
Squalene content (mg kg ⁻¹)	128,05	66,51	28,48	24,60	29,04	40,39
Phytosterol content (mg kg ⁻¹)	2393,99	1812,35	2044,82	2004,76	1808,02	1890,92
Campesterol (% phytosterols)	6,86	7,35	11,21	11,26	8,21	8,02
Stigmasterol (% phytosterols)	6,07	8,64	7,37	8,05	7,90	7,66
Δ^7 -campesterol (% phytosterols)	1,46	1,40	1,56	1,12	1,87	2,66
Clerosterol (% phytosterols)	0,60	0,71	0,73	1,03	1,14	0,55
β -sitosterol (% phytosterols)	65,39	57,24	59,60	62,17	57,67	53,83
Δ^5 -avenasterol (% phytosterols)	0,21	4,14	3,70	2,67	4,62	2,21
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,45	0,36	0,62	0,86	0,73	0,61
Δ^7 -stigmastenol (% phytosterols)	17,24	15,31	12,68	10,43	14,51	21,61
Δ^7 -avenasterol (% phytosterols)	1,73	4,85	2,52	2,42	3,35	2,85

Supplementary Table 1 (continued).

Trait	NC094732	NC094733	NC094734	NC094735	NC094736	NC094737
Kernel (%)	54,00	39,60	53,79	50,22	42,22	47,91
Hundred-seed weight (g)	12,08	5,91	13,82	11,68	8,88	10,76
Hundred-kernel weight (g)	6,53	2,35	7,44	5,87	3,77	5,16
Seed oil content (%)	23,66	20,75	20,28	19,91	16,36	22,70
Kernel oil content (%)	43,81	52,42	37,70	39,62	38,78	47,33
Palmitic acid (% total fatty acids)	8,91	7,69	8,19	9,28	9,00	8,02
Stearic acid (% total fatty acids)	3,59	2,93	3,47	2,00	3,70	3,34
Oleic acid (% total fatty acids)	31,79	38,08	27,27	24,60	29,70	27,77
Linoleic acid (% total fatty acids)	55,63	51,13	60,91	63,88	57,49	60,87
Tocopherol content (mg kg ⁻¹)	176,08	167,61	113,99	262,80	179,21	250,54
α -tocopherol (% tocopherols)	98,57	98,90	99,41	99,68	99,31	98,23
β -tocopherol (% tocopherols)	1,43	1,10	0,59	0,28	0,69	1,77
Squalene content (mg kg ⁻¹)	30,38	30,93	62,27	33,72	19,62	37,88
Phytosterol content (mg kg ⁻¹)	2134,69	2868,89	2324,83	1983,14	2211,72	1643,70
Campesterol (% phytosterols)	7,66	9,32	6,89	15,64	10,18	13,95
Stigmasterol (% phytosterols)	6,19	7,52	7,39	7,60	8,72	7,49
Δ^7 -campesterol (% phytosterols)	1,23	2,12	1,73	0,85	1,48	0,87
Clerosterol (% phytosterols)	1,20	0,83	0,76	0,86	0,94	0,78
β -sitosterol (% phytosterols)	64,92	58,56	59,67	55,10	57,89	61,27
Δ^5 -avenasterol (% phytosterols)	2,32	1,49	2,81	9,08	4,34	4,72
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,95	0,63	0,78	1,23	0,82	1,10
Δ^7 -stigmastenol (% phytosterols)	13,26	16,17	16,77	7,07	12,74	8,01
Δ^7 -avenasterol (% phytosterols)	2,28	3,37	3,21	2,57	2,89	1,83

Supplementary Table 1 (continued).

Trait	NC094738	NC094739	NC094740	NC094741	NC094742	NC094743
Kernel (%)	54,83	46,30	48,20	57,70	55,77	51,91
Hundred-seed weight (g)	8,24	9,52	5,64	8,58	9,77	11,25
Hundred-kernel weight (g)	4,52	4,42	2,73	4,95	5,43	5,78
Seed oil content (%)	18,75	19,78	18,93	23,78	21,78	22,13
Kernel oil content (%)	34,19	42,73	39,49	41,19	39,04	42,68
Palmitic acid (% total fatty acids)	9,10	8,26	6,90	6,68	8,00	8,18
Stearic acid (% total fatty acids)	3,64	1,91	2,74	3,88	3,24	3,10
Oleic acid (% total fatty acids)	25,80	32,52	34,61	28,98	37,20	35,87
Linoleic acid (% total fatty acids)	61,46	57,11	55,72	60,35	51,41	52,85
Tocopherol content (mg kg ⁻¹)	286,42	130,56	257,44	168,04	146,88	215,91
α -tocopherol (% tocopherols)	98,85	99,78	98,44	96,53	98,94	98,72
β -tocopherol (% tocopherols)	1,15	0,22	1,56	3,47	1,06	1,28
Squalene content (mg kg ⁻¹)	20,14	29,08	17,56	33,13	32,04	36,28
Phytosterol content (mg kg ⁻¹)	1896,50	2730,93	1877,87	1766,27	2265,97	1876,52
Campesterol (% phytosterols)	6,94	9,46	4,44	12,78	7,81	7,66
Stigmasterol (% phytosterols)	6,67	6,69	11,25	5,95	6,37	6,72
Δ^7 -campesterol (% phytosterols)	1,25	2,72	1,74	1,71	1,90	1,95
Clerosterol (% phytosterols)	0,75	0,66	0,45	0,66	0,94	0,93
β -sitosterol (% phytosterols)	62,03	57,83	51,53	57,40	59,91	60,55
Δ^5 -avenasterol (% phytosterols)	2,55	0,18	2,35	6,30	3,08	0,32
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,73	0,75	1,20	0,69	1,06	0,93
Δ^7 -stigmastenol (% phytosterols)	15,96	19,27	21,88	11,04	14,38	18,43
Δ^7 -avenasterol (% phytosterols)	3,12	2,45	5,16	3,47	4,55	2,51

Supplementary Table 1 (continued).

Trait	NC094744	NC094745	NC094750	NC094751	NC094754	NC094756
Kernel (%)	56,31	55,64	57,22	55,16	52,61	48,50
Hundred-seed weight (g)	15,36	9,54	8,40	14,18	10,96	11,88
Hundred-kernel weight (g)	8,69	5,26	4,81	7,90	5,77	5,72
Seed oil content (%)	24,82	23,95	25,50	25,88	22,48	22,08
Kernel oil content (%)	44,09	43,11	44,55	47,00	42,69	45,56
Palmitic acid (% total fatty acids)	6,55	7,15	6,76	7,01	7,06	7,91
Stearic acid (% total fatty acids)	2,42	3,76	4,88	4,27	2,85	4,51
Oleic acid (% total fatty acids)	42,96	39,10	39,33	63,69	27,12	43,95
Linoleic acid (% total fatty acids)	48,07	49,97	48,97	24,82	62,96	43,63
Tocopherol content (mg kg ⁻¹)	228,83	224,18	217,63	234,91	212,85	311,10
α -tocopherol (% tocopherols)	98,43	98,57	96,87	97,92	98,01	97,14
β -tocopherol (% tocopherols)	1,57	1,43	3,13	1,85	1,99	2,86
Squalene content (mg kg ⁻¹)	44,70	40,80	21,62	45,30	38,14	46,14
Phytosterol content (mg kg ⁻¹)	1499,84	1725,03	1734,50	2231,95	2232,57	2222,90
Campesterol (% phytosterols)	11,68	10,73	9,39	8,92	13,27	8,62
Stigmasterol (% phytosterols)	7,50	7,01	7,08	6,05	8,55	8,42
Δ^7 -campesterol (% phytosterols)	0,90	1,47	1,35	1,50	2,14	1,07
Clerosterol (% phytosterols)	0,74	0,77	0,86	0,88	0,71	0,65
β -sitosterol (% phytosterols)	59,17	60,31	55,25	56,91	56,91	56,14
Δ^5 -avenasterol (% phytosterols)	4,33	1,54	6,38	5,32	2,07	9,03
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,80	1,17	0,44	1,01	0,83	0,75
Δ^7 -stigmastenol (% phytosterols)	11,90	14,68	15,14	16,98	12,43	11,94
Δ^7 -avenasterol (% phytosterols)	2,99	2,31	4,12	2,42	3,09	3,39

Supplementary Table 1 (continued).

Trait	NC094757	NC094758	NC094759	NC094760	NC094761	LSD (5%)
Kernel (%)	48,77	51,62	51,95	52,07	46,58	7.8
Hundred-seed weight (g)	7,60	11,87	9,72	10,15	9,92	4.0
Hundred-kernel weight (g)	3,75	6,09	5,06	5,30	4,62	2.4
Seed oil content (%)	20,98	18,74	18,17	21,72	21,00	3.7
Kernel oil content (%)	42,94	36,38	34,95	41,75	45,10	5.6
Palmitic acid (% total fatty acids)	8,11	7,29	8,02	8,93	8,29	1.5
Stearic acid (% total fatty acids)	3,97	4,53	3,02	2,26	4,07	1.3
Oleic acid (% total fatty acids)	30,28	22,94	33,50	32,50	28,32	10.4
Linoleic acid (% total fatty acids)	57,63	65,24	55,47	55,86	59,32	9.8
Tocopherol content (mg kg ⁻¹)	284,95	372,79	260,46	172,02	146,75	86.7
α -tocopherol (% tocopherols)	98,48	97,62	98,33	99,01	98,82	1.4
β -tocopherol (% tocopherols)	1,43	1,81	1,40	0,99	1,18	1.2
Squalene content (mg kg ⁻¹)	12,15	17,46	14,26	30,20	38,92	39.4
Phytosterol content (mg kg ⁻¹)	2842,95	2480,73	2174,28	2570,06	1997,03	719.9
Campesterol (% phytosterols)	9,13	10,73	5,31	11,17	8,90	3.3
Stigmasterol (% phytosterols)	8,57	9,02	7,91	4,81	6,69	2.4
Δ^7 -campesterol (% phytosterols)	1,68	2,45	1,86	1,46	1,23	0.9
Clerosterol (% phytosterols)	0,82	0,60	0,84	0,67	0,48	0.6
β -sitosterol (% phytosterols)	59,63	56,09	51,76	63,18	52,52	6.8
Δ^5 -avenasterol (% phytosterols)	0,22	5,11	7,11	1,77	10,74	3.4
$\Delta^{5,24}$ -stigmastadienol (% phytosterols)	0,69	0,71	1,45	0,76	1,60	1.1
Δ^7 -stigmastenol (% phytosterols)	16,92	11,89	17,70	13,99	12,66	7.0
Δ^7 -avenasterol (% phytosterols)	2,35	3,41	6,07	2,18	5,19	1.5