

Supplementary data:

Table 1. The name and origin of studied oily sunflower genotypes under well watered and water stressed conditions over two years.

No.	Name	Origin	Research centre	No.	Name	Origin	Research centre
1	H100A/83HR4	France	ASGROW	51	RHA265	France	ASGROW
2	H209A/LC1064	France	ASGROW	52	PM1-3	USA	USDA
3	H205A/H543R	France	ASGROW	53	RT948	France	RUSTICA
4	AS5306	France	ENSAT	54	283-ENSAT	-	-
5	RHA858	USA	USDA	55	QHP-1	France	INRAMONT
6	H209A/83HR4	France	ASGROW	56	SDR19	USA	USDA
7	AS3211	France	ENSAT	57	HA337B	USA	USDA
8	254-ENSAT	France	ENSAT	58	H100B	France	ASGROW
9	AS5304	France	ASGROW	59	B454/03	HUNGARY	-
10	1009329.2(100K)	France	ENSAT	60	HA304	USA	USDA
11	270-ENSAT	France	ENSAT	61	RT931	France	RUSTICA
12	AS613	France	ASGROW	62	HA335B	USA	USDA
13	A-F1POPA	France	NOVARTIS	63	NS-B5	France	NOVARTIS
14	OES	France	INRAMONT	64	SDB3	USA	USDA
15	H100A/LC1064	France	ASGROW	65	LC1064C	France	ASGROW
16	RHA266	France	USDA	66	NS-R5	France	NOVARTIS
17	PAC2	France	ENSAT	67	DM-2	USA	USDA
18	H157A/LC1064	France	ASGROW	68	H156A/RHA274	France	ASGROW
19	5DES20QR	France	BRN	69	SDB1	USA	USDA
20	1009337(100K)	France	ENSAT	70	HAR-4	USA	USDA
21	AS3232	France	ENSAT	71	AS5305	France	ASGROW
22	12ASB3	France	ASGROW	72	RHA274	USA	USDA
23	8ASB2	France	ASGROW	73	H158A/H543R	France	ASGROW
24	9CSA3	France	Caussade semences	74	H100A/RHA274	France	ASGROW
25	H049+FSB	France	-	75	H209A/H566R	France	ASGROW
26	SSD-580	France	ASGROW	76	ASO-1-POP-A	France	ENSAT
27	5AS-F1/A2×R2	France	ASGROW	77	AS6305	France	ENSAT
28	7CR16=PRH6	France	C.F	78	B-F1POPB	France	NOVARTIS
29	ENSAT699	France	ENSAT	79	D34	USA	USDA
30	SSD-581	France	ASGROW	80	CAY	France	ENSAT
31	TMB-51	France	INRAMONT	81	346	Iran	SPII
32	11×12	Iran	SPII	82	NS-F1-A5×R5	France	NOVARTIS
33	110	Iran	SPII	83	36	Iran	SPII
34	H603R	France	INRAMONT	84	38	Iran	SPII
35	4	Iran	SPII	85	SDB2	France	INRAMONT
36	703-CHLORINA	France	ENSAT	86	H158A/LC1064	-	-
37	NSF1-A4×R5	France	NOVARTIS	87	H156A/H543R	France	ASGROW
38	28	Iran	SPII	88	H543R/H543R	France	ASGROW
39	30	Iran	SPII	89	H543R	France	-
40	F1250/03	HUNGARY	-	90	15038	France	ASGROW
41	SDR18	USA	USDA	91	SF076	France	ENSAT
42	LP-CSYB	France	ENSAT	92	8A×LC1064C	-	-
43	803-1	SERBIA	IFVC	93	SF085	France	ENSAT
44	1009370-1(100K)	France	ENSAT	94	SF092		
45	CSWW2X	France	Caussade semences	95	A-CONTROL PLASTIPIC	France	ENSAT
46	1009370-	France	ENSAT	96	1-59	Iran	SPII

	3(100K)					
47	H158A/H543R	France	ASGROW	97 H-100A-90RL8		
48	H100A	France	ASGROW	98 SF109	France	ENSAT
49	15031	France	ASGROW	99 SF105	France	ENSAT
50	H205A/83HR4	France	ASGROW	100 SF-023		

Table 2. List of SSR primer pairs used in the present study.

Primer	Repeat motifs	Forward primer	Reverse primer	Linkage Reference	Position (cM) ¹	Annealing Temperature(°C)
ORS785	(AG)17	CAAAATACCCAGGTCAAAGCA	CCTAGCTTATGGGACGTATGGA	LG4 Tang <i>et al.</i> (2002)	53.8	57
ORS807	(AG)15	CCGATATTTTGACCGATATTTTGC	TCTCACCCCTTCATCTCCTTCC	LG16 Tang <i>et al.</i> (2002)	67.9	57
ORS608	(AT)6(AG)11	CATGGAAAGCCGAGTTCTCT	CGTGCGTGATTAACATACCC	LG6 Tang <i>et al.</i> (2002)	44.7	57
ORS609	(AG)20	GCGAAGGAACTGAACCGATA	GGATTTTAGTCCGCCAATCA	LG12 Tang <i>et al.</i> (2002)	56.0	57
ORS1079	(CT)26	TACGACTGACGATTCCATTTCTC	AACTGGATTTACAGGGAGTGTT	LG14 Tang <i>et al.</i> (2002)	14.4	59
ORS718	(CT)13	CACTTTACGCACACCAAACC	ATGCAACACCCGAATCAAAG	LG3 Tang <i>et al.</i> (2002)	30.2	57
ORS1265	(CT)18	GGGTTTAGCAAATAATAGGCACA	ACCCTTGGAGTTTAGGGATCA	LG9 Tang <i>et al.</i> (2002)	25.0	59
ORS949	(AC)13	TGCAAGGTATCCATATCCACAA	TATACGCACCCGAAAGAAAGTC	LG3 Tang <i>et al.</i> (2002)	49.2	57
ORS378	(GT)17	GTGAAACCTTCGGACCTCTG	GTACAAAATTATAAATAAAAACAATA	LG16 Tang <i>et al.</i> (2002)	86.3	57
ORS694	(AG)17	CCTGGAACTGAACCGAGAAC	GCCGTGAAACAGAGAGAGGA	LG14 Tang <i>et al.</i> (2002)	35.8	57
ORS621	(CT)14	CGCCTTATGCTGAGAGGAAA	CCTGAAGCGAAGAAGAATCG	LG11 Tang <i>et al.</i> (2002)	1.1	57
ORS488	(AC)14	CCCATTCACTCCTGTTTCCA	CTCCGGTGAGGATTTGGATT	LG3 Tang <i>et al.</i> (2002)	67.2	57
ORS728	(AG)7	CTCCATAGCAACCACCTGAAA	CCAAACTCTGAATGATACTTGTGAC	LG1 Tang <i>et al.</i> (2002)	25.2	57
ORS844	(AC)17	ACGATGCAAAGAATATACTGCAC	CATGTTTAATAGGTTTTAATTCTAGGG	LG9 Tang <i>et al.</i> (2002)	75.5	59
ORS878	(AC)11	TGCAAGGTATCCATATCCACAA	TATACGCACCCGAAAGAAAGTC	LG10 Tang <i>et al.</i> (2002)	29.9	59
ORS1179	(AG)18	GATTCGGAGCTGTTAGGAGGTAG	AAACGGGAAGCAAGAATAGAACA	LG13 Tang <i>et al.</i> (2002)	60.1	59
ORS1215	(CT)10	ATACTTCCACCCTCAAATCCA	GGTTGCGGTAGTGGTCTGTAGT	LG15 Tang <i>et al.</i> (2002)	74.8	59
ORS1242	(CT)14	GCAATCGTTTCACTCTCCATTC	TGGTCGTAGAATTGTCGGTCAT	LG15 Kiani <i>et al.</i> (2007a,b)	63.3	59
ORS822	(GT)8	CAATGCCATCTGTCATCAGCTAC	AAACAAACCTTTGGACGAAACTC	-	-	59
ORS1256	(GT)8(AG)25	GATGTTGATGTTGGTGAAGTTGC	CTCCGTCACCTTAAGCACTTGTA	-	-	59
ORS630	(CT)15	TGTGCTGAGGATGATATGCAG	GCACGACCCGGATATGTAAC	-	-	54
ORS1088	(CT)15	ACTATCGAACCTCCCTCCAAAC	GGATTTCTTTCATCTTTGTGGTG	-	-	59
ORS733	(AG)21	TATGAGTTGGCAAGGGCTTC	GGACTCCAACGAGAGAATCAGT	-	-	57
ORS617	(GA)17	GGTACTTGGTATTCATGGGTCAT	GACACCGCCAACCTTAACACTT	-	-	57
ORS565	(AG)13	TGGTCAACGGATTTAGAGTCAA	TCCAGTTTGGTCTTGATTTGG	-	-	54
ORS1064	(CT)19	TGAATGATCTATGAGTGGTGTATGG	ACTCGCAGTGGTAAGTCGTTAGG	-	-	59
ORS1209	(AG)12	AACAAGCAAGCAAATCAACCATA	AGAATTAACCCCAACCCGGAAC	-	-	59
ORS1264	(AG)28	TAGAAGCGGTTGGGTTGACAGTA	TGAACTCGGTTGATTCTCTAGCC	-	-	59
HA3040	-	GACCCGAACCACACT	GTTCTTGCTTCGATCC	-	-	57
HA3070	-	GGGATGAGCTCTGTC	CTTTTCAATTCCCCTGCT	-	-	57

Table 3. Names and sequence of retrotransposon primers used in the study.

Retrotransposon primers	Sequence (5'→3')	ISSR primers	Sequence (5'→3')
1061LTR	AGAGGGGAATGTGGGGGTTTC	UBC-818	CACACACACACACACAG
1062LTR	TCTCTATTTATAGCCGGAGAGGTG	UBC-826	ACACACACACACACACAC
1063LTR	GATCCGGTTTCACGGGACTTAC	UBC-840	GAGAGAGAGAGAGAGAYT
1064LTR	CGAAGAACAACCCGAATCACC	UBC-857	ACACACACACACACACYG
1065LTR	AGCCTCTGAAAGACTCGTTCG	A13	GTGTGTGTGTGTCC
CF	GGTTTAGGTTGTAATCCTCCGCG	UBC-812	GAGAGAGAGAGAGAGAA
CR	ACAGACACCAGTGGCACCAAC	UBC-864	ATGATGATGATGATGATG
UF(U81)	TAACGGTGTCTGTTTTGCAGG	UBC-880	GGAGAGGAGAGGAGA
UR1(U82)	AGAGGGGAATGTGGGGGTTTC		
IRAP primers	Annealing temperature	REMAP primers	Annealing temperature
1062	57	1061-UBC818	58
1065	56	1064-UBC826	58
1061-1065	60	1064-UBC818	60
1062-1065	53	1065-UBC818	56
1063-1064	55	1063-UBC826	56
1063-1065	57	1061-UBC840	56
1064-1065	57	1064-UBC857	56
CF	60	1061-UBC857	60
CR	58	1064-A13	60
UF(U81)	58	1065-UBC826	58
UR1(U82)	56	1064-UBC840	58
CF-CR	56	CF-UBC826	58
UF-UR1	60	CF-UBC818	58
CR-UR1	60	UR1-UBC840	56

References

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