

Table S2: Sexual phenotype, incompatibility groups and intensity of fruiting of the *Fraxinus excelsior* trees from the two populations (Camprieu and Aures) located in the Cevennes National Park (southern France).

Individual genotypes (IG)	Geographic origin of IG	Geographic origin of IG	Average value of sexual phenotype	SI group	Intensity of fruiting in 2015
Cevennes_1	Camprieu	N 44°06'19.4"; E 3°29'36.4"	1,0	G2	0
Cevennes_5	Camprieu	N 44°06'19.4"; E 3°29'36.4"	1,0	G2	0
Cevennes_14	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_18	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_20	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_23	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_25	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_28	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,0	G2	0
Cevennes_41	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_42	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_43	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_46	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_48	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_55	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_62	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,0	G2	0
Cevennes_70	Camprieu	N 44°06'46.6"; E 3°28'31.0"	1,0	G2	0
Cevennes_71	Camprieu	N 44°06'46.6"; E 3°28'31.0"	1,0	G2	0
Cevennes_73	Camprieu	N 44°06'46.6"; E 3°28'31.0"	1,0	G2	0
Cevennes_96	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_111	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_115	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_118	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_119	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_121	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_123	Aures	N 44°12'45.1"; E 3°28'28.9"	1,0	G2	0
Cevennes_9	Camprieu	N 44°06'19.4"; E 3°29'36.4"	1,5	G2	0
Cevennes_30	Camprieu	N 44°06'43.8"; E 3°28'51.9"	1,5	G2	0
Cevennes_51	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,5	G2	0
Cevennes_64	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,5	G2	0
Cevennes_113	Aures	N 44°12'45.1"; E 3°28'28.9"	1,5	G2	0
Cevennes_128	Aures	N 44°12'45.1"; E 3°28'28.9"	1,5/1,5	G2	0
Cevennes_17	Camprieu	N 44°06'43.8"; E 3°28'51.9"	2,5/1,0	G2	0
Cevennes_33	Camprieu	N 44°06'43.8"; E 3°28'51.9"	2,0	G2	0
Cevennes_76	Camprieu	N 44°06'46.6"; E 3°28'31.0"	2,0	G2	0
Cevennes_86	Camprieu	N 44°06'46.6"; E 3°28'31.0"	2,0	G2	0
Cevennes_95	Aures	N 44°12'45.1"; E 3°28'28.9"	2,0	G2	0
Cevennes_101	Aures	N 44°12'45.1"; E 3°28'28.9"	2,0	G2	0
Cevennes_131	Aures	N 44°12'45.1"; E 3°28'28.9"	2,0	G2	0
Cevennes_132	Aures	N 44°12'45.1"; E 3°28'28.9"	2,0	G2	0
Cevennes_97	Aures	N 44°12'45.1"; E 3°28'28.9"	2,5	G2	1
Cevennes_63	Camprieu	N 44°06'46.7"; E 3°28'37.5"	1,5/4,2	G1	4
Cevennes_137	Aures	N 44°12'45.1"; E 3°28'28.9"	3,0	G2	1
Cevennes_133	Aures	N 44°12'45.1"; E 3°28'28.9"	3,0	G1	5
Cevennes_135	Aures	N 44°12'45.1"; E 3°28'28.9"	3,0/4,0	G1	5
Cevennes_27	Camprieu	N 44°06'43.8"; E 3°28'51.9"	4,0	G1	4
Cevennes_98	Aures	N 44°12'45.1"; E 3°28'28.9"	4,0	G1	3
Cevennes_134	Aures	N 44°12'45.1"; E 3°28'28.9"	4,0	G1	5
Cevennes_139	Aures	N 44°12'45.1"; E 3°28'28.9"	4,0	G1	5
Cevennes_74	Camprieu	N 44°06'46.6"; E 3°28'31.0"	4,5	G1	5
Cevennes_61	Camprieu	N 44°06'46.7"; E 3°28'37.5"	5,0	G1	1
Cevennes_93	Aures	N 44°12'45.1"; E 3°28'28.9"	5,0	G1	4
Cevennes_99	Aures	N 44°12'45.1"; E 3°28'28.9"	5,0	G1	3
Cevennes_112	Aures	N 44°12'45.1"; E 3°28'28.9"	5,0	G1	2
Cevennes_117	Aures	N 44°12'45.1"; E 3°28'28.9"	5,0	G1	4
Cevennes_129	Aures	N 44°12'45.1"; E 3°28'28.9"	4,0/6,0	G1	4
Cevennes_78	Camprieu	N 44°06'46.6"; E 3°28'31.0"	5,5	G1	5
Cevennes_11	Camprieu	N 44°06'43.8"; E 3°28'51.9"	6,0	G1	4
Cevennes_21	Camprieu	N 44°06'43.8"; E 3°28'51.9"	6,0	G1	1
Cevennes_110	Aures	N 44°12'45.1"; E 3°28'28.9"	6,0	G1	4
Cevennes_124	Aures	N 44°12'45.1"; E 3°28'28.9"	6,0	G1	1
Cevennes_114	Aures	N 44°12'45.1"; E 3°28'28.9"	6,5	G1	4

Of the 140 trees labelled and followed for sexual phenotype and self-incompatibility in the two *F. excelsior* subpopulations located in Camprieu (88 trees) and Aures (52 trees), 61 flowered in 2016 and were included in the study.

Average value of sexual phenotype: for each tree, in 2016, two inflorescences were scored for the proportion of male, hermaphrodite and female flowers and assigned to one of seven phenotypic categories (Albert et al. 2013). For each genotype, a mean value was calculated using the two inflorescence scores. For the few plants that also flowered in 2017 (the two values indicated for 2015/2016), the same survey was performed and we give the average value over the two years.

SI group: each flowering tree was assigned to one SI group (G1 or G2) using interspecific stigma tests.

Intensity of fruiting in 2015: in November 2015, each tree was photographed and the intensity of fruiting of each genotype was estimated by counting the clusters of samaras (fruits) on pictures and assigned to one of the six classes. 0: no fruits; 1: rare fruits; 2: clusters of samaras present on less than 50% of branches; 3: clusters of samaras present on 50% of branches; 4: clusters of samaras present on more than 50% of branches; 5: clusters of samaras on all branches.