

Supplementary Material

Fig. S1 - Germination rates of the progenies of the hybrids, *Q. ilex* and *Q. suber* for 2011, 2012 and 2014. The error bars indicate the standard error.

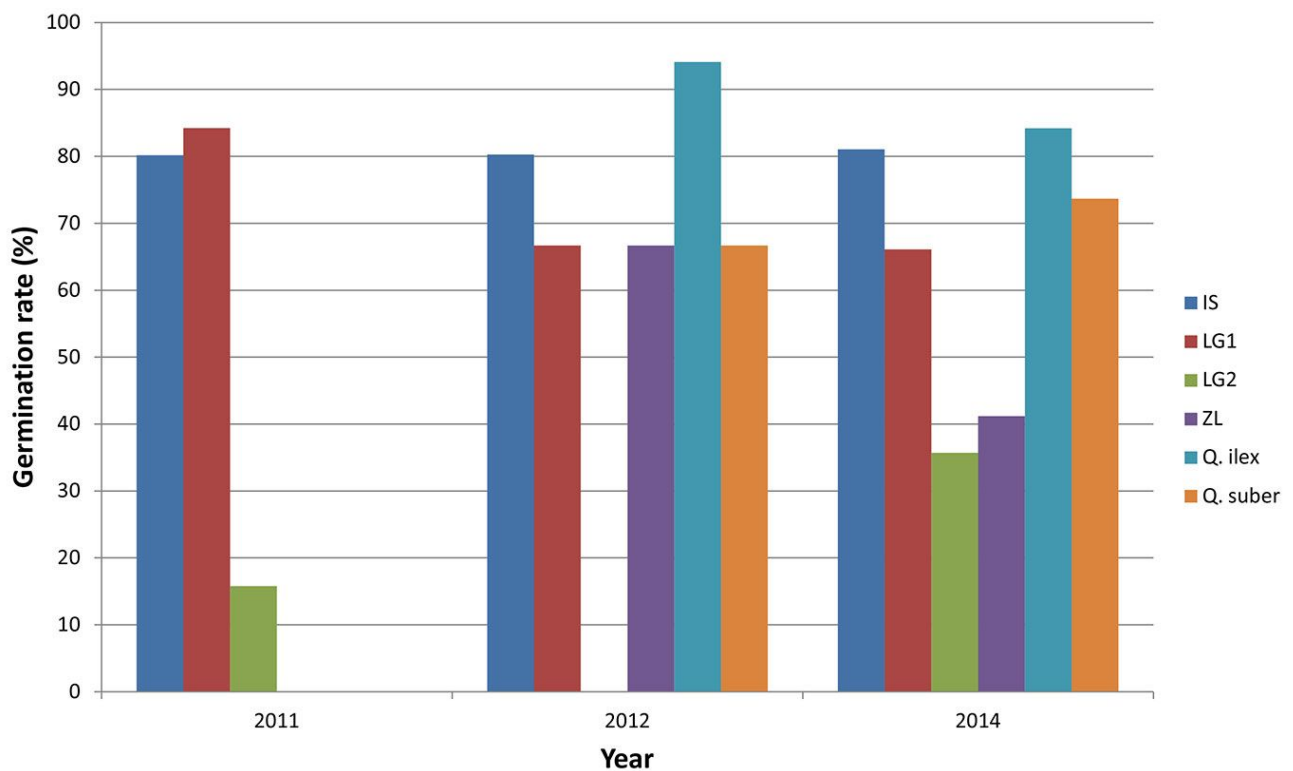


Fig S2 - Most probable number of genetic groups (K) inferred with the test of Evanno et al. (2005).

The highest value of ΔK suggests that the optimal number of genetic groups is $K = 2$.

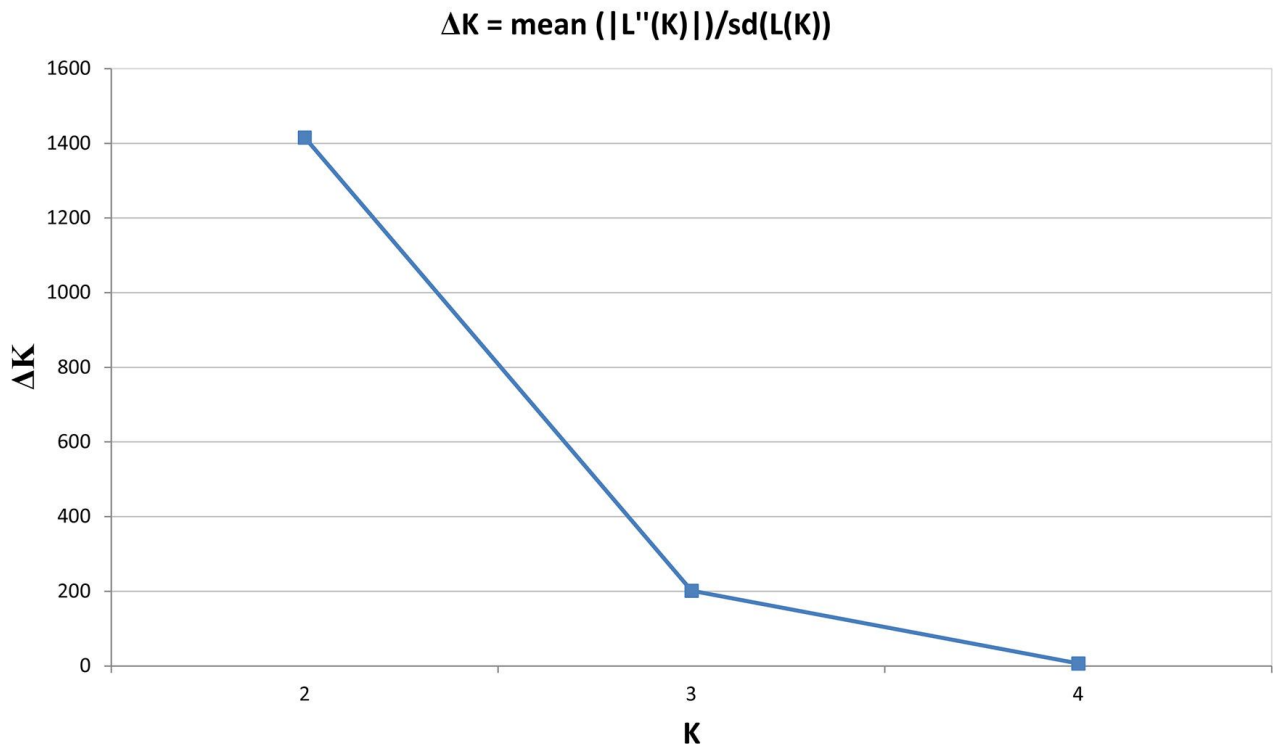
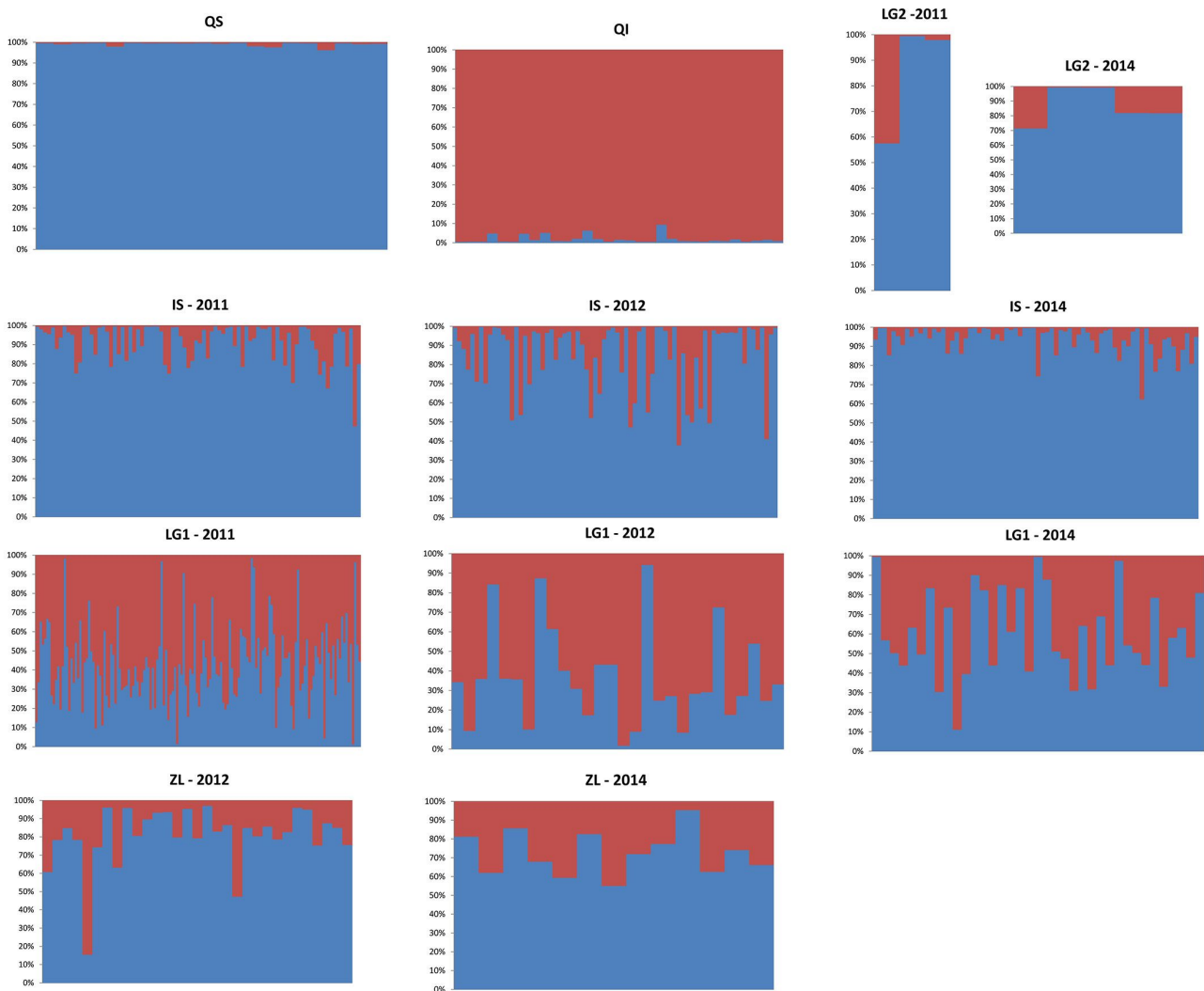


Fig S3 - Barplots showing the relative contribution of *Q. ilex* and *Q. suber* to each offspring as the proportion of q_i and q_s estimated with STRUCTURE. The results are shown for all *Q. ilex* and *Q. suber* progenies together, and for each hybrid family by year.



Tab. S1 - Number of virtual individuals by the specific categories defined according to q_s intervals generated with SIMHYB (Soto et al. 2017). QS pure *Q. suber*; BCs suberoid; F1 hybrid; BCi ilicioid; QI pure *Q. ilex*.

Specific category	q_s interval	N
QS	$q_s > 0.85$	25556
BCs	$0.85 < q_s \leq 0.65$	3523
F1	$0.65 \leq q_s < 0.35$	1158
BCi	$0.35 \leq q_s < 0.15$	3873
QI	$q_s \leq 0.15$	25561