

Table S1. Elements and soil characteristics in the four experimental plots. SEVal: San Esteban Valley, SESlo: San Esteban Slope, HCVal: Haza de la Concepción Valley, HCSlo: Haza de la Concepción Slope. Analysed by the Agro-food Laboratory of the Junta de Extremadura.

Determination	Unit	SEVal	SESlo	HCVal	HCSlo
Calcium (Ca ⁺⁺)	meq/100 g	2.78	0.87	2.47	1.09
Assimilable calcium	meq/100 g	2.34	0.51	2.05	0.65
Cation exchange capacity	meq/100 g	6.75	8.90	7.59	8.46
Electrical conductivity 1:5 20°C	mmhos/cm	0.040	0.021	0.035	0.019
Assimilable phosphorus (Olsen method P)	ppm	<2.00	<2.00	3.43	<2.00
Magnesium (Mg ⁺⁺)	meq/100 g	0.73	0.81	0.84	0.73
Assimilable magnesium	meq/100 g	0.57	0.65	0.68	0.57
Oxidizable organic matter	%	1.26	1.50	2.61	1.60
pH value in water 1:2.5	-	5.40	4.80	5.20	4.80
Potassium (K ⁺)	meq/100 g	0.13	0.12	0.24	0.15
Sodium (Na ⁺)	meq/100 g	0.20	0.13	0.10	<0.10
Texture	-	silty-loam	silty-loam	loamy	loamy
Clay	%	10.66	9.01	8.97	8.07
Sand	%	28.42	38.54	41.85	45.43
Silt	%	60.92	52.45	49.18	46.50
Coarse elements	%	5.01	23.2	37.0	56.9
Total nitrogen (N Kjeldahl)	%	0.09	0.10	0.14	0.12
C/N ratio	-	8.11	8.70	10.9	7.75
Ca/Mg ratio	-	3.80	1.07	2.94	1.49
Mg/K ratio	-	5.62	6.75	3.50	4.87
Sulphates (SO ₄ ⁻)	ppm	undetected	undetected	undetected	undetected

Table S2. Mortality (%) of *Quercus ilex* seedlings in the greenhouse after five months of controlled infection with *Phytophthora cinnamomi* (Pc) according to provenances^[1], mortality (%) in the field experiment on soil naturally infected by Pc at the five months after planting and mortality at four years (end of field experiment). Means of constitutive chemical defences measured in *Q. ilex* leaves (total phenols Tp, total tannins Tt and condensed tannins Ct) from the aforementioned test carried out in the greenhouse. Average values according to provenance: plants of P (Picos de Europa), O (Ordesa), M (Monfragüe), C (Cabañeros), and S (Sierra Nevada). Different letters denote statistically significant differences.

Provenance	5-month greenhouse mortality (%)^[1]	5-month field mortality (%)	4-year field mortality (%)	4-year mortality and plants with symptoms (%)	Tp^[1]	Tt^[1]	Ct^[1]
P	47.5b	15.96	60.64	94.68a	36.44	71.35	70.64
O	36.96b	17.07	80.49	95.12a	36.80	68.30	50.17
M	8.33a	14.52	56.03	89.65	39.97	90.72	72.11
C	20	13.11	61.47	88.52	51.67	94.83	69.50
S	11.36a	12.90	64.52	86.29b	41.58	75.58	64.81

^[1] Rodríguez-Romero *et al.* (2022)