

Figure S1. Climatic description of the studied trials of Scots pine for the period 1988–2017. Mean (\pm standard deviation) monthly temperature (lines) and precipitation (bars) are shown.

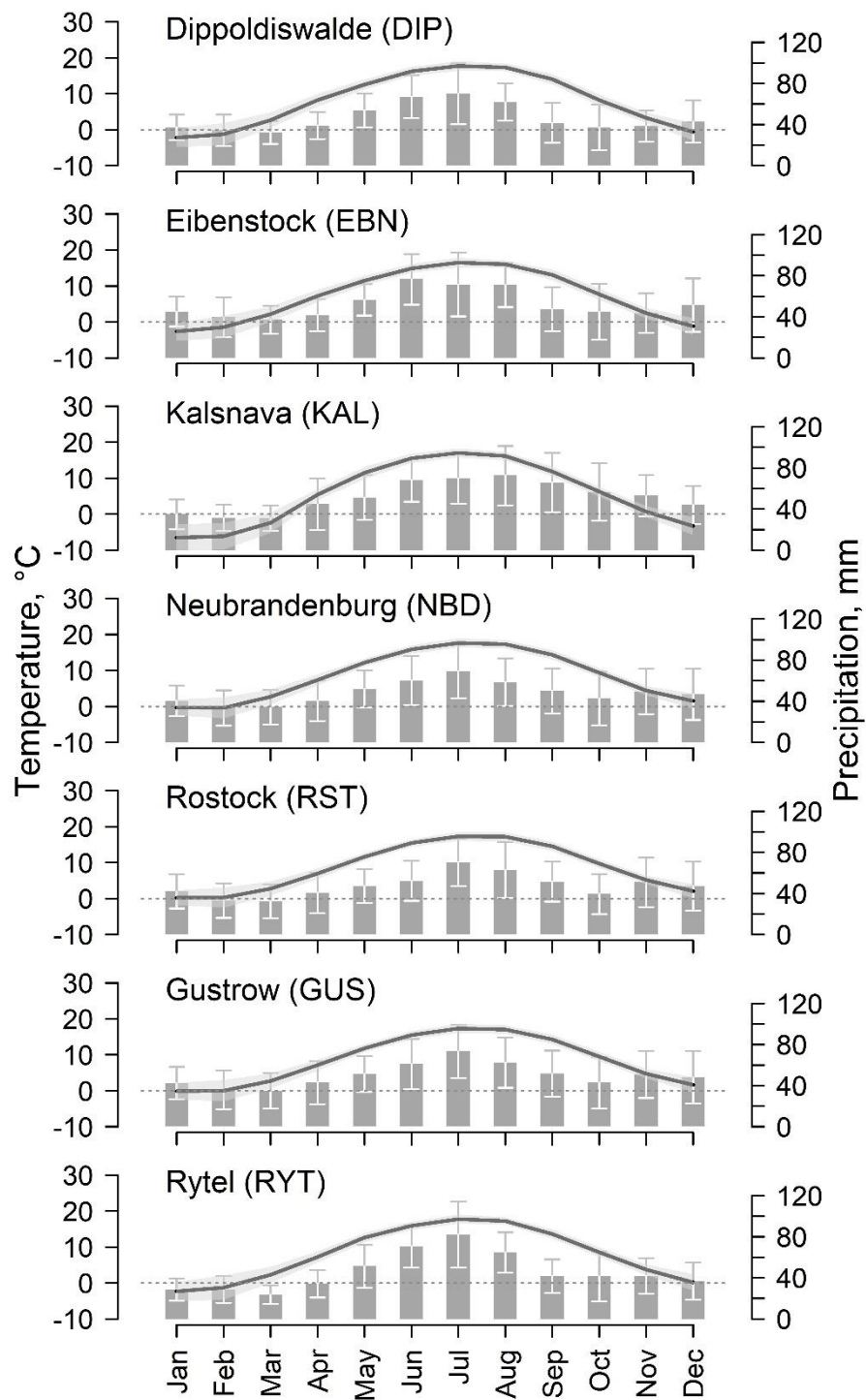


Figure S2. Climatic description of the studied provenances of Scots pine for the period 1945–1974. Mean (\pm standard deviation) monthly temperature (lines) and precipitation (bars) are shown. The fine dotted line represents 0° C temperature.

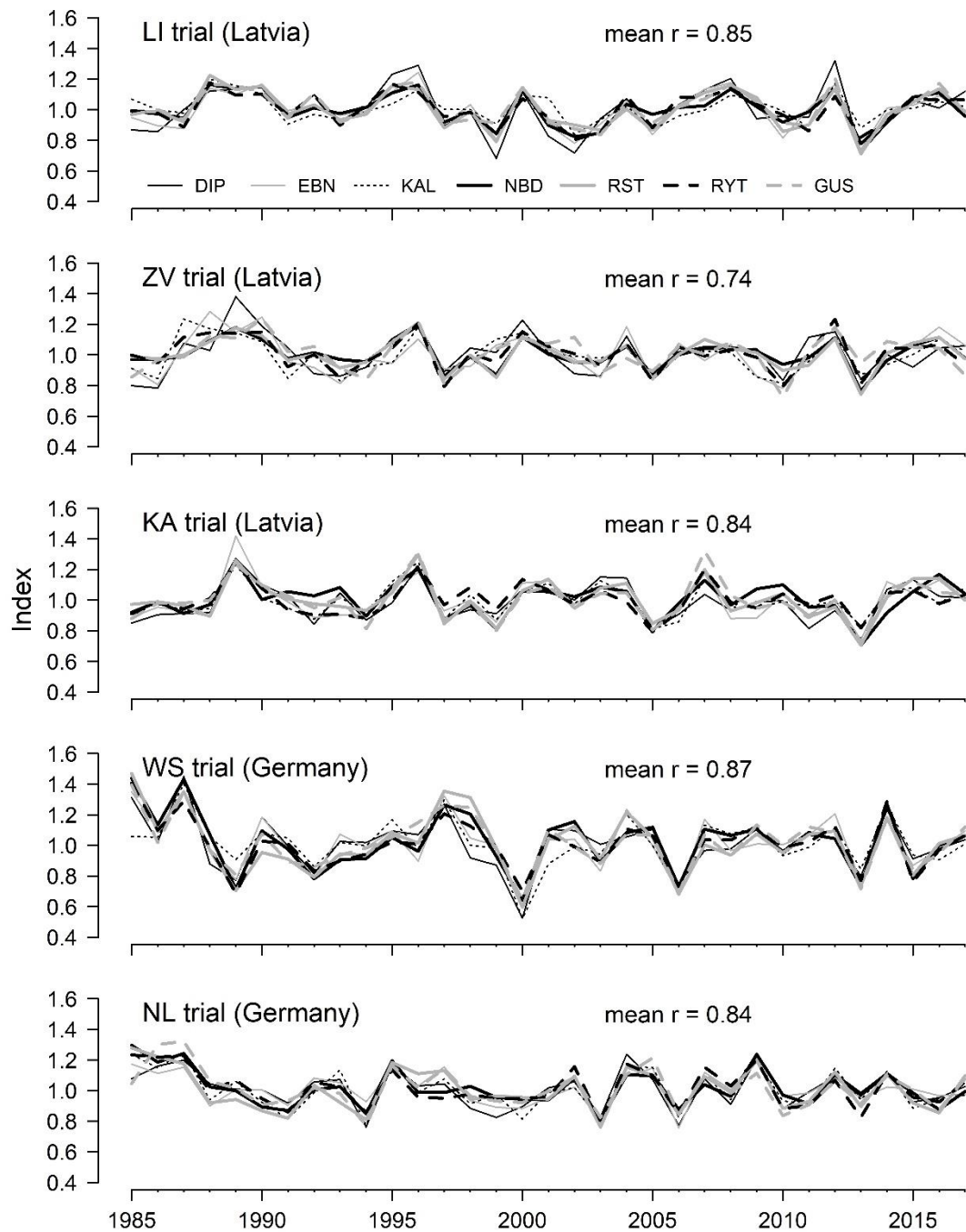


Figure S3. Residual chronologies of basal area increment (prewhitened time series of the biweight robust mean of relative additional basal area increment) of the studied provenances by trials for the period 1985–2017.

Table S1. General description of field performance of the studied provenances of Scots pine in three trials in the hemiboreal zone in Latvia. Number of surviving trees, overall survival, mean tree height (H), stem diameter at breast height (DBH), standing volume (M), and ranking (according to tree height) are shown.

Provenance	Rank according to H (from 59)	Surviving trees	Overall survival	H, m	DBH, cm	M, m3/ha
Liepāja (LI)						
Rytel (RYT)	3	42	0.61	13.85	18.64	207.61
Güstrow (GUS)	20	42	0.61	13.18	18.17	192.19
Rostock (RST)	12	42	0.60	13.55	18.62	202.27
Neubrandenburg (NBD)	4	42	0.61	13.83	19.48	224.33
Kalsnava (KAL)	35	36	0.52	12.76	17.14	144.75
Eibenstock (EBN)	40	42	0.61	12.70	16.38	118.87
Dippoldiswalde (DIP)	58	27	0.39	11.83	15.00	84.11
Zvirgzde (ZV)						
Rytel (RYT)	4	40	0.58	12.53	16.62	146.35
Güstrow (GUS)	2	42	0.61	12.95	16.12	145.29
Rostock (RST)	1	42	0.61	12.99	16.40	149.32
Neubrandenburg (NBD)	27	34	0.49	11.75	15.41	103.42
Kalsnava (KAL)	28	40	0.58	11.69	14.33	105.54
Eibenstock (EBN)	57	36	0.52	10.71	12.92	73.81
Dippoldiswalde (DIP)	59	32	0.46	10.28	10.59	45.95
Kalsnava (KA)						
Rytel (RYT)	1	35	0.51	12.30	15.54	112.14
Güstrow (GUS)	14	37	0.53	11.18	13.65	86.30
Rostock (RST)	27	38	0.55	10.91	13.74	89.43
Neubrandenburg (NBD)	5	39	0.54	11.61	14.69	106.36
Kalsnava (KAL)	33	38	0.55	10.84	13.45	81.56
Eibenstock (EBN)	58	40	0.58	9.72	11.65	62.51
Dippoldiswalde (DIP)	59	23	0.33	9.50	10.57	30.26