

Parameter	Value and dimension	References
Growth		
Quadratic term of the equation for diameter growth rate	$-0.003 \ln(\text{cm}) \text{cm}^{-2}$	data-based estimate similar to Fyllas et al. (2010)
Linear term of the growth function	$0.030 \ln(\text{cm}) \text{cm}^{-1}$	
Constant term of the growth function	$-1.98 \ln(\text{cm})$	
Seed production, dispersal, and establishment		
Factor of seed productivity	8	literature-based estimate (Krukliis and Milyutin, 1977, cited in Abaimov, 2010)
Background germination rate	0.01	tuned
Horizontal seed dispersal distance at wind speed of 10 km h^{-1}	60.1 m	estimated following Matlack (1987)
Seed descent rate	0.86 m s^{-1}	estimated descent rate based on Matlack (1987)
Mortality		
Background mortality rate	0.0001 year^{-1}	data-based estimate
Current tree growth influence factor on tree mortality	0.0	tuned
Weather influence factor on tree mortality	0.1	tuned
Density influence factor on tree mortality	2.0	tuned
Seed fertility	2 years	Ban et al. (1998)
Mean temperature of the coldest month (January) at the border of the species' geographical range	-45°C	Shugart et al. (1992)
Exponent scaling the height influence	0.2	tuned
Weather processing		
Exponent scaling the influence of surrounding density for a tree	0.1	tuned
Exponent scaling the density value	0.5	tuned