

Supplementary material 4 for Lehsten et al. Simulating migration efficiently in the dynamic vegetation model using LPJ-GM 1.0

Table 3.1 Species specific parameters: All parameters are either taken from Lischke *et al.*, (2006) or Hickler *et al.*, (2012) see also Smith *et al.*, (2001) for further explanation of parameters with respect to LPJ-GUESS.

| Parameter | <i>Fagus sylvatica</i> | <i>Betula pendula</i> | Unit |
|---|------------------------|-----------------------|----------|
| Min. temp. for survival | -14 | -30 | Degree C |
| Shade tolerance | Tolerant | Intolerant | |
| Leaf phenology | Summergreen | Summergreen | |
| Min. temp. for reproduction | -13 | -30 | Degree C |
| Max temp for reproduction | 6 | 7 | Degree C |
| Continentalty parameter | 5 | - | Degree C |
| Minimum GDD5 for reproduction | 1100 | 350 | |
| Max lifespan | 400 | 300 | Years |
| LAI scaler for seed production | 5 | 2 | |
| Min. height for seed production | 14.4 | 4.5 | m |
| Germination rate | 0.3 | 0.19 | |
| Max seed age | 3.3 | 4.8 | years |
| Fractions of seeds within short term disp | 0.99 | 1 | |
| Short term dispersal parameter | 25 | 200 | m |
| Long term dispersal parameter | 200 | 0 | m |

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landscape model for simulating spatio-temporal patterns from stand to landscape scale, *Ecol. Modell.*, 199(4), 409–420, doi:10.1016/j.ecolmodel.2005.11.046, 2006.

Smith, B., Prentice, I. C. and Sykes, M. T.: Representation of vegetation dynamics in the modelling of terrestrial ecosystems: comparing two contrasting approaches within European climate space, *Glob. Ecol. Biogeogr.*, 10(6), 621–637, 2001.