

**Rozendaal, D.M.A., O.L. Phillips, S.L. Lewis, K. Affum-Baffoe, E. Alvarez Dávila, A. Andrade, L.E.O.C. Aragão, A. Araujo-Murakami, T.R. Baker, O. Bánki, R.J.W. Brienen, J.L.C. Camargo, J.A. Comiskey, M.N. Djuikouo K., S. Fauset, T.R. Feldpausch, T.J. Killeen, W.F. Laurance, S.G.W. Laurance, T. Lovejoy, Y. Malhi, B.S. Marimon, B.-H. Marimon Junior, A.R. Marshall, D.A. Neill, P. Núñez Vargas, N.C.A. Pitman, L. Poorter, J. Reitsma, M. Silveira, B. Sonké, T. Sunderland, H. Taedoumg, H. ter Steege, J.W. Terborgh, R.K. Umetsu, G.M.F. van der Heijden, E. Vilanova, V. Vos, L.J.T. White, S. Willcock, L. Zemagho, and M.C. Vanderwel. 2020. Competition influences tree growth, but not mortality, across environmental gradients in Amazonia and tropical Africa. Ecology.**

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## **Data S1**

**R code for the growth and the mortality model.**

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## **File list**

Model\_script.R

## Description

Models were fit using the 'filzbach' R package. The code for the models for Amazonia is indicated (102 plots), for Africa the same models were used. Model parameters are explained in Appendix S2.

The dataframe "data" includes treelevel data, the following columns were included in the models:

WD - tree wood density ( $\text{g cm}^{-3}$ )

dbh - tree diameter at breast height in the first census (cm)

neighBA - basal area of neighbour trees in the 0.04-ha subplot ( $\text{m}^2 \text{ha}^{-1}$ )

PlotCode - plot identifier

BAGrowth - annual basal area growth ( $\text{cm}^2 \text{yr}^{-1}$ )

dead - 1 indicates that the tree is dead, 0 indicates that the tree is alive

IntervalLength - length of the census interval (yr)

Model\_script.R - File including the model code.

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