



Editor
Plant Cell and Environment

David Herrera

Postbox 10 01 64 07701 Jena Germany Phone +49 (0)3641 57-6152

E-Mail: dherrera@bgc-jena.mpg.de Web: www.bgc-jena.mpg.de

18 February 2023

Dear Editor,

We are submitting the manuscript entitled "Carbon dynamics in tropical trees from a seasonal dry forest reveals storage-growth trade-off", for consideration in "Plant Cell and Environment" as Original Research Article.

In this manuscript we investigated the seasonality of non-structural carbon (NSC) in tree stems, and how it relates to changes in carbon sink activity such as growth and respiration. We also investigated the influence of precipitation on NSC dynamics in a seasonally dry forest in southern Amazonia. We classified species in 4 functional groups, combining leaf habit (deciduous and semi-deciduous) and storage strategy of starch in the stem wood (fiber-storing species and parenchyma-storing species), which helped to explain temporal carbon dynamics in relation with precipitation. We found that semi-deciduous/fiber storing species have larger seasonal changes in starch mass and clearer trade-offs between NSC storage and growth than the other functional groups. This suggests that these species may have a tighter control on carbon sink activity and higher prioritization of NSC storage over growth, giving them advantages to survive and recover from stress.

We would like to suggest Jordi Martínez-Vilalta as the reviewer from the Editorial Review Board, and Meghan Blumstein as second reviewer for the manuscript.

On behalf of all the coauthors,

Thanks for your consideration

David Andres Herrera Ramirez

