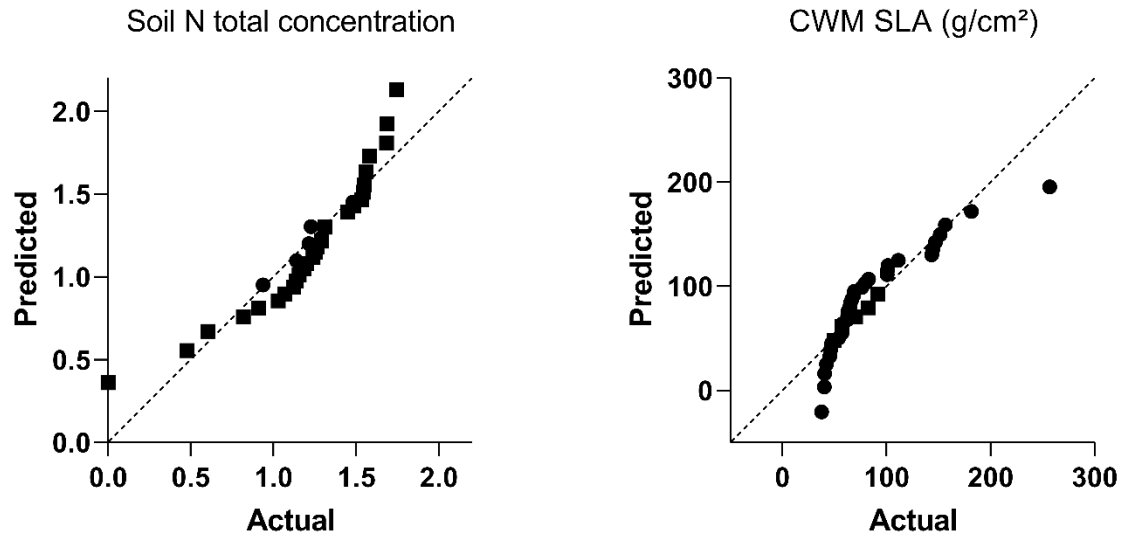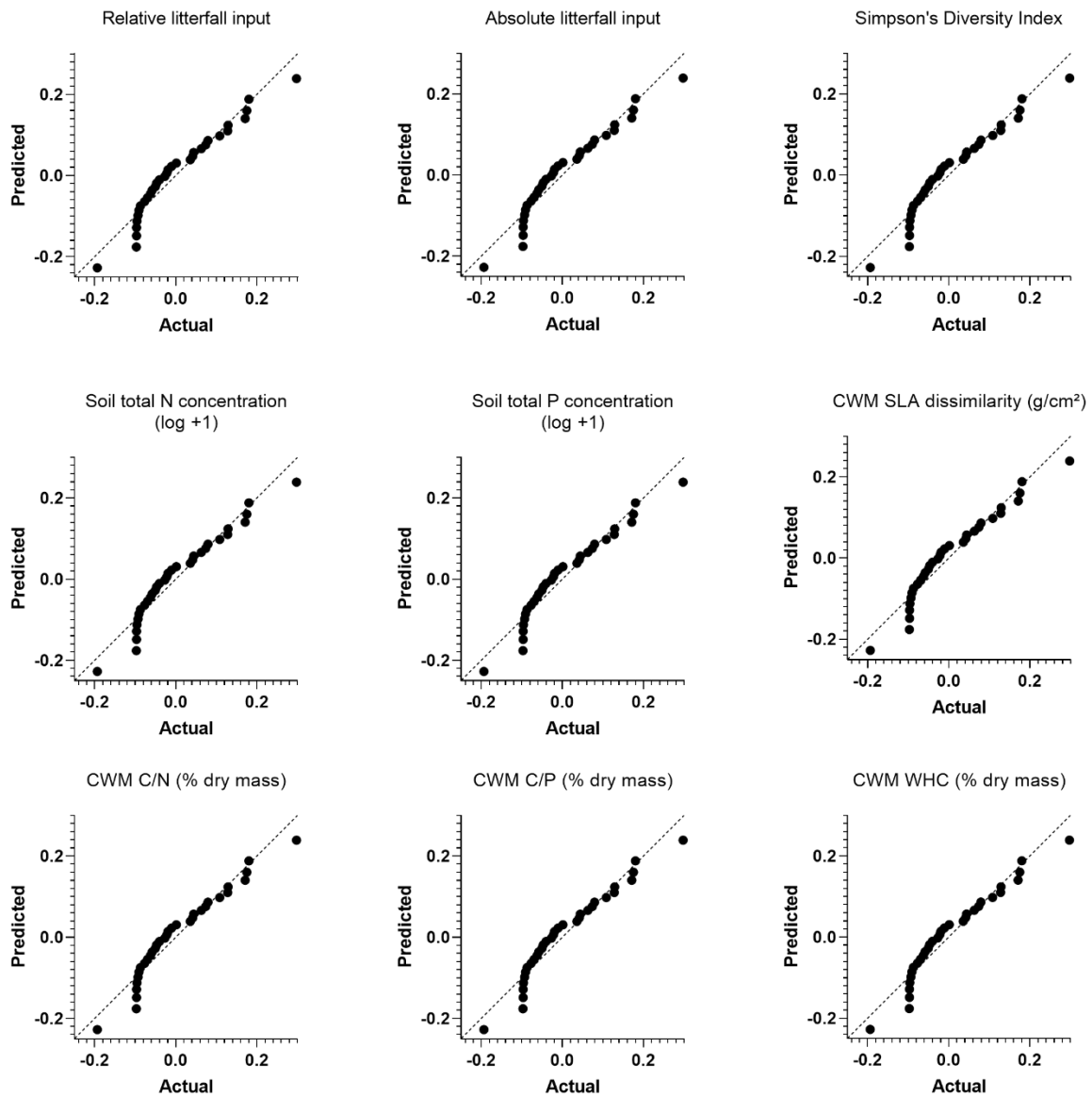**Supplementary material**

Figure 1. Distribution of the residuals for total soil N concentration and CWM SLA.

Figure 2. Distribution of the residuals for the home-field effect index on *M. ramuliflora* decomposition for the 39 plots.

Variation in litter traits for the most abundant species

We measured C, N, P, K, Ca, Na, and Mg of leaf litter by species to compare the nutrients concentration similarities among the 33 most abundant species in the study site (Silva et al. 2018)**.** The total carbon (C) concentration was estimated using the combustion method and infrared CO_2 detection in Shimadzu TOC-5000 analysis. The K, Ca, Na, and Mg concentrations were estimated by the nitro-perchloric digestion method according to (Sarruge & Haag 1974). Measurements of nitrogen (N) and phosphorus (P) concentrations in the litter followed the same protocol used for soil nutrient measurements.

Differences among litter traits were evaluated through the Principal Component Analysis (PCA) performed using the *prcomp* function from the "stats" package (Team R Development Core 2018). We estimated the variance inflation factor (VIF) through the "PerformanceAnalytics" package (Peterson et al. 2020) before the analyses to avoid multicollinearity, in which all traits had values less than three. In addition, we scaled and centered the traits.

The first PCA axis mainly represented N, P, and K concentrations, explaining 38.62% of the variation among species (Figure 3). The second axis shows a division between species with higher Na concentrations and species with higher Ca and Mg concentrations, explaining 30.91%. *M. ramuliflora* generally showed a high similarity in nutrient concentration compared to other analyzed species (triangle symbol, Figure 3).
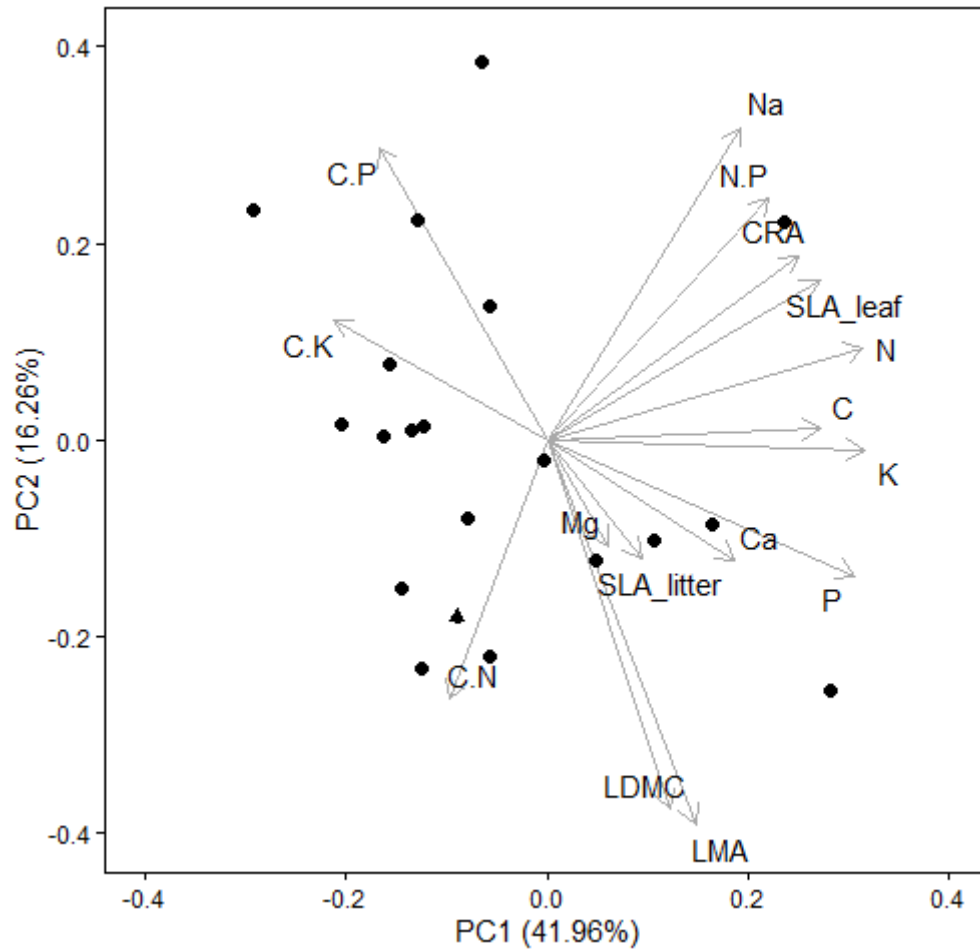
Figure 3. Principal component analyses for the chemical traits (N, P, K, Ca, Mg, and Na) for the 33 species in a tropical heath vegetation in Brazil (5°54′ S, 35°10′ W). The triangle symbol indicates the target species, *M. ramuliflora*, using in the home-field advantage experiment.

References

PETERSON, B., CARL, P., & BOUDT, K. 2020. Package 'PerformanceAnalytics' Title Econometric Tools for Performance and Risk Analysis.

SARRUGE, J. . & HAAG, H. P. 1974. Análise química das plantas. . 56 pp.

SILVA, J. L. A., SOUZA, A. F., CALIMAN, A., VOIGT, E. L. & LICHSTON, J. E. 2018. Weak whole-plant trait coordination in a seasonally dry South American stressful environment. *Ecology and Evolution* 8:4–12.

TEAM R DEVELOPMENT CORE. 2018. A Language and Environment for Statistical Computing.