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FUNCiTREE: A tree trait base of seasonally dry agro-silvopastoral ecosystems

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Abstract

Plant traits are widely used as indicators of eco-physiological and other functions that support plant establishment and persistence, often referred to as *response traits*. Similarly, plant traits can be used to define the effects of plant on the environment and on other organisms, *effect traits*. Traits can then be used to predict general ecological functions and those that underpin the provision of ecosystem services.

The FUNCiTREE trait base gathers tree traits that are related to four functions important in agro-silvo-pastoral systems in seasonally dry climates in the tropics: 1) tree strategies of water and resource use, 2) tree-understory vegetation interactions, 3) soil formation and 4) fodder production. The data base has a modular structure and is formed by 3 major groups of data. The *location* and habitat information entries consist of data such as the tree geographical position, landscape form, and land-use and soil type. The *trait* entries are structured in a nested manner, with identifiers at the level of organ, individual and species. The date and/or sampling period and the source of the data are documented for each entry. A third group of data consists of *effect functions* and includes data linked to the tree individuals or species such as productivity and diversity of understory vegetation, soil chemistry and animal forage preference.