

ABSTRACT BOOK AND PROGRAM

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Characterization of Adult Brazil Nut Trees in Extractive Reserve Chico Mendes, Acre, Brazil

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Brazil nut (*Bertholletia excelsa*) is an emergent canopy species occurring on non-flooded lands (*terra firme*) in the Amazon basin. Its seeds or nuts, which are collected in the wild and sold on the international market, are an important income source for extractive families living throughout the species range. Seed collection appears to be ecologically sustainable as recent comparative studies demonstrate no negative impact on population structure. Still, technologies for improving production are needed to enhance the economic sustainability of extractive reserves.

The objective of this preliminary study, executed in a 465-ha Brazil nut-rich forest within Extractive Reserve Chico Mendes, was to examine factors affecting Brazil nut productivity, focusing on effects of vine loads on adults. Only trees ≥ 30 cm DBH were considered adults and included in the analysis given that no tree below this cutoff produced fruit. For each tree, DBH was measured, and GPS coordinates and categorical data on vine load, nut production, and crown form and position were collected. Densities and diameter distributions were calculated for the stand.

Adult Brazil nut densities were 1.01 individuals ha⁻¹. Mean population DBH was 99 cm, and 90% of individuals were between 47.6 and 150.2 cm. The number of trees with vines was high (60.3%), and almost half of these were considered to have heavy loads. Preliminary statistical analyses indicate that heavy vine loads negatively affect nut production.

Traditional knowledge indicates that vine cutting favors Brazil nut production. Future research focusing on silvicultural treatments for reducing vine competition is recommended.

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