Data on fruit production and diameter were collected annually from a stratified sample of 129 Bertholletia excelsa trees in each of two extractive reserves. The large, canopy-emergent B. excelsa is a cornerstone of the Amazonian extractive economy, supporting a multimillion-dollar commodity crop (Brazil nut), which is harvested almost exclusively from old-growth terra firme forests. The same sampling protocols were followed in the two reserves, Filipinas and Cachoeira, located in Acre, Brazil, which have similar climate and forest types. The objective of the project was to assess the drivers of production at a tree- and site-level using data from 2010-2015 and 2016-2019. Tree-level data included information on tree crown size and form, as well as competition from neighboring trees. These data have been supplemented by publicly available observations of climate to assess the relative effects of individual tree and site-level factors, as well as climatic variability, on long-term productivity of this economically and ecologically important long-lived tree.