

**Biodiversity and
Bioeconomy:
Fostering sustainable
value chains based on
the macaúba palm in
Brazil**



AcroAlliance Project: 2023 Rewind

The AcroAlliance Project: Seeding the future of novel crops

The AcroAlliance team shares the following information with its stakeholders and the public interested in macaúba about the latest developments in the project. The following sections pinpoint the latest advances in each of the respective work packages (WPs). We invite our stakeholders, collaborators, and the general public to stay in touch with us through our webpage and social media accounts, where we will be sharing up to date information and breakthrough news surrounding the project.

WP1-Development of planting material (UFV, IAC)

Work Packages

How and why to domesticate a wild species of acrocomia (macaúba) palm? To obtain the ideal macaúba fruits for various purposes, first we need to identify the most feasible seed material adapted to a wide range of growing conditions. The objective is to evaluate the properties of “elite trees”, to then establish a macaúba seed orchard, as well as assessing the possible genetic seed vulnerability.



WP2-Evaluation of cropping systems (UFV, UHOH)

Which crop management system would be better suited for macaúba cropping? This WP identifies the best agricultural practices through a modeling approach. Here, first hand data on growth and yield performance is collected, then modelled using the Water, Nutrient, and Light Capture in Agroforestry Systems (WaNuLCAS) model. Testing scenarios with different weather conditions and crop management practices is essential for establishing a sustainable macaúba production in the future.



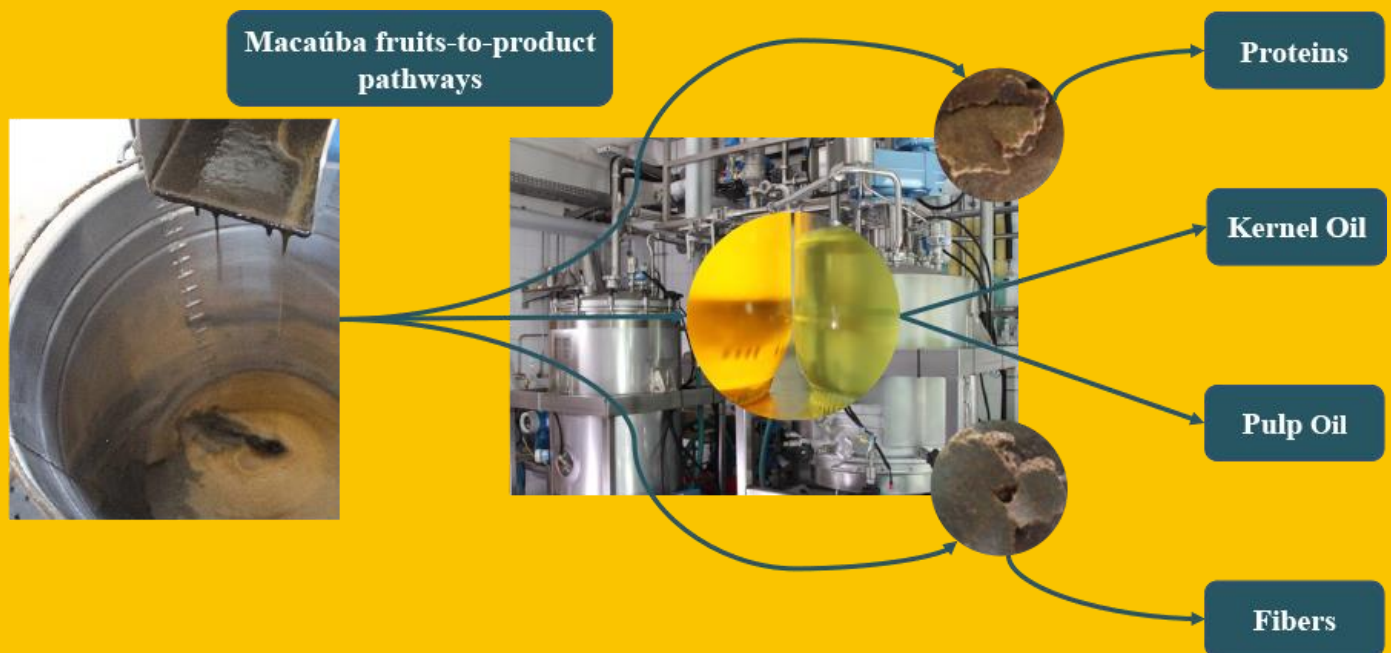


WP3- Post harvesting, storage & pre-processing. (UFV, IVV)

What happens after the harvesting? How to process the macaúba? This WP deals with the post-harvesting processes. Here the best post-harvesting and pre-processing practices are identified, with the objective of ensuring maximum quality for the macaúba byproducts.

WP4- Decentralized Biorefinery Concept (IVV, ITAL)

How can we turn a freshly harvested crop into a valuable end product? Every crop is different, and so the processing behind it. This WP focuses on the process optimization and the conceptual design of a small-scale bio-refinery. Its objectives are to refine the oils from the pulp and kernel, obtain fibers and proteins as well as optimize the fractionation processes.



WP5- Product Development (ITAL, IVV)

What to do with fibers, oils, and proteins obtained from the last step? What can be produced out of macaúba? WP5 tests novel products and defines a product portfolio, while assessing the performance of the obtained byproducts and demonstrates the technical and economic viability of such products.



WP6- Value chain analysis and implementation strategies (UHOH)

How to connect the macaúba value chain's building blocks and stakeholders from biomass to products? In this WP, a multi-criteria value web analysis based on the WP contributions is performed, integrating technical, environmental and socioeconomic aspects. The goal is to conceptualize a value web for the macaúba plant and identify sustainable business models, governance and development strategies.



WP7- Dissemination, Communication and Exploitation of Project Results (UFV, UHOH)

How to translate science into practical language? WP7 is in charge of the dissemination and communication of the results. Here, stakeholders are involved with partners and respective WPs to share the current advances and integrate new knowledge arising from the project with practitioners and the public.

WP8- Project Management (UHOH, UFV)

How to keep everything together? This WP coordinates and organizes activities among all AcroAlliance partners, including monitoring, reporting, data management, internal communication, risk and contingency, among others.

Scan the QR code to find out more about the project



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