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**THE IMPORTANCE OF
COOPERATIVISM FOR
LOCAL DEVELOPMENT:
THE CASE OF COEX –
CARAJÁS – STATE OF
PARÁ, BRAZIL**

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Abstract: The objective was to understand the relationship between the extraction of jaborandi seeds and leaves and the form of subsistence for local communities in the municipality of Parauapebas/PA. This is a bibliographical research. Extractivism and the management of non-timber forest products in the Amazon are identified as the main ways of guaranteeing a source of income for these communities. The entity that represents the municipality's leaf collectors is COEX-CARAJÁS, responsible for the families' livelihood/income.

Keywords: Extractivism; economy; seeds; reforestation, jaborandi.

INTRODUCTION

Plant extractivism in the Brazilian Amazon dates back to the context of the subsistence collection practices of indigenous peoples and their commercial relations of exchanging extractive products, the so-called "drugs from the backlands", with Europeans during the occupation of the North region, in Brazil-colony (Schmitz et al., 2009).

This historical link allowed the activity to play a decisive role in the socioeconomic formation of the country and, above all, of the Amazon region itself due to the existence of a wide variety of natural products (extractives) such as fibers, wood, dyes, rubber, and a variety of seeds (Gumier - Costa et al., 2016).

The biological diversity of tropical forests is considered a great potential to be explored as an alternative income for local communities and as a guarantee of food security, as it directly provides food, medicine, construction materials, tools, among others (Ribeiro; Silva, 2019).

As we can see, the activity is very important for the economy and livelihood of many families who depend on seed extraction, the resources are many and so is the variety of what can be done with the product. The collection

of seeds is used to reforest areas, whether legal or physical, they also serve as medicine and also open up a range for the creation of biojewelry, where they also provide income for family support (Ribeiro; Silva, 2019).

The cooperative started mainly due to the great need to collect jaborandi leaves; Therefore, the seeds were spread. Given the wide variety of possibilities for seeds, the women of the cooperative members began to work with the creation of biojewelry, with these products being displayed at exhibition fairs, stores and local businesses.

That said, the aim of this work was to understand the relationship between the extraction of jaborandi seeds and leaves and the form of subsistence for local communities in the Municipality of Parauapebas (PA).

MATERIALS AND METHODS

This is a bibliographical research, with a qualitative approach. To collect data, meetings were held between students to identify potential questions that would be asked to the cooperative. A semi-structured questionnaire was therefore created and, subsequently, a visit was made to the cooperative. In the presence of some representatives, we sought to understand a little more about the activity process, as well as the cooperative itself, involving questions about administration, company finances, environmental care, among others, as shown in Figure 1.



Figure 1. On the left: record of the interview with ANA PAULA, COEX Administrator; on the right: interview with RODRIGO, Agricultural Engineer at COEX.

RESULTS AND DISCUSSION

It was observed that the leaf pickers' working modus operandi is made up of several processing stages, that is, from collection to shipping of the product.

In relation to the product phases, from collection to sale, they consist of the following operations, as shown in Figure 2, below:

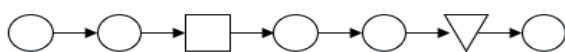


Figure 2. Flowchart of operations from collection to dispatch – jaborandi leaves – COEX/CARAJÁS.

Figure 2 shows the following operations in sequence, namely:

- Material collection
- Receiving the material
- Separation
- Cleaning
- Packaging and Identification
- Storage
- Expedition

Currently, COEX-CARAJÁS has around 39 members. It is worth noting that the cooperative members collect the material in a completely extractive and sustainable way in the Carajás National Reserve. The work they do is legal and has authorizations from competent bodies, such as ICMBIO.

After collecting the material, the cooperative carries out cleaning and classification work in order to prepare the material for sale to the final consumer (whether an individual or legal entity).

The composition of the price cost is defined by some variables such as product quality. 170 species and more than 50 families of seeds are sold, all divided into some groups based on vulnerability and/or exclusivity of the Carajás biome (endemic).

The cooperative's legal and accounting data is outsourced, so COEX maintains assiduous control of its costs and profits, just like any private company. After settlement of the invoice, payment of fixed expenses (salary remuneration of employees under the CLT regime), members finally receive the "leftover" amount, varying according to the quantity sold.

Until the collection phase, members are responsible; After that, a team of paid COEX employees takes over, doing everything from sorting, cleaning and packaging the products for sale. Figure 3 shows some of the cooperative members who participate in these operations.



Figure 3. Visit to some COEX-CARAJÁS (PA) members.

Currently, COEX-CARAJÁS has two well-aligned work fronts, that is, one collecting seeds and leaves in the forest, and the other front working directly on drying, packaging, weighing and selling the product, as shown in Figure 4.



Figure 4. On the left: collected seeds, ready and separated for a customer; on the right: seeds already separated - ready for a customer.



As for profit, the prorated amount is what is “left over” after paying all costs (direct and indirect). It is worth noting that the individual values were not disclosed, however we were informed by the cooperative’s administration that the average value per kg of seeds is R\$ 222.77. However, in a report presented by the company VALE, dated 06/06/2022, an estimate of 17 tons of seeds harvested by COEX between 2020 and 2022 is mentioned, yielding more than R\$2.8 million to cooperative families, in Carajás region.

CONCLUSION

It is concluded that the regulatory formation of the Cooperative was an important step towards productive organization, since all members began to understand the value of the jaborandi leaf as a way of subsistence, that is, generation of family economic income.

It also highlights three very important aspects. The first is COEX’s way of working with nature, a completely sustainable activity that provides a service of great social, economic

and environmental relevance, especially for the Carajás region. And secondly, it is what differentiates it, by having a WOMAN at the helm, in the management of the cooperative, since recent years (a reason for much praise and pride on the part of the cooperative members), showing the strength and potential of women in the management of cooperatives.

And, finally, the old ways of collecting and negotiating production were replaced through the planning of activities and the incorporation of new work techniques. It was noted that this change represented a positive impact on the lives of the families of the cooperative members, who began to carry out their work safely and with socio-environmental responsibility.

Regarding specific process improvements, it can be concluded that the storage part is considered a bottleneck, especially because it is a product that can undergo changes due to climatic situations (temperature and relative humidity).

Therefore, it is recommended to use product inventory management and control methods, such as: FIFO (First -in / First -out) and ABC Curve, to guarantee a lower percentage of losses and increase in profit.

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