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MANAGEMENT OF COOPERATIVES FOR SOCIOECONOMIC DEVELOPMENT IN VILA CAMBURÃO IN THE MUNICIPALITY OF ALENQUER, WITH EMPHASIS ON CUMARU

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ABSTRACT

The present article analyzed the cumaru almond (*Dipteryx odorata*) in the municipality of Alenquer-Pará. The primary information was obtained at Vila Camburão, by means of interviews with agents involved in commercialization and extraction. The secondary information was obtained through the Brazilian Institute of Geography and Statistics (IBGE), as well as other sites focused on agribusiness and rural commerce. The information collected shows the great productive potential that the municipality presents faced the national scenario. It shows the municipality of Alenquer-Pará as an isolated leader due to the high quantity produced. All this production can bring diverse socioeconomic benefits in the places where the production and the extraction take place, in view of the sustainable management and the adequate commercialization in the places involved in the production and commerce of the almond. The data analysis of the IBGE-2016 research showed oscillations regarding the amount produced in recent years, which has been showing a decrease in the production of the almond in the municipality of Alenquer, thus threatening the high future production. This drop was due to several factors such as inadequate management, burning, illegal logging and lack of support for the extractive community. The proposed solution for large-scale production is the installation of cooperatives aimed at the production and the processing of cumaru almond. It would bring, not only an increase in production, but also an improvement in the quality of the products and, consequently, the aggregation of value in the commodity.

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INTRODUCTION

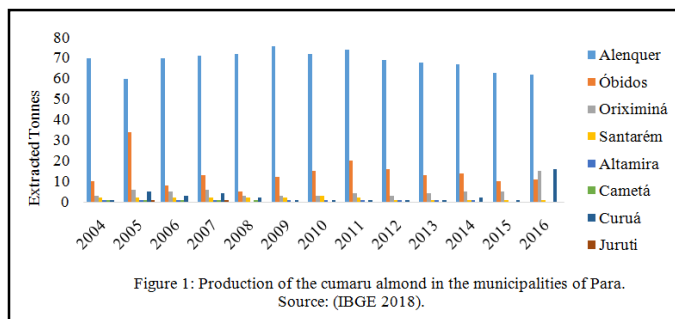
In the societies inserted in the capitalist dynamics, the market is the main institution. However, the participation in the market does not always guarantee the participants good conditions to be agents of their own development (Sen and klisberg 2010). Depending on the market structure, certain actors may engage in predatory conduct that impacts local development. The municipality of Alenquer has large sources of non-timber forest products (NWFP) with high economic and socio-environmental value. Many of these products are important for the treatment of diseases, for the cosmetics and beverage industry and as food, among others.

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One of the primary products of forest origins that has come to stand out is the cumaru almond. The cumaru kernel has called attention to the uses in the pharmaceutical industries, in the perfumery and cosmetics industry, in the cigarette industry among others (Rêgo et al. 2016; Silva et al. 2010). This fact has broadened its economic potential and role in the development of extractive communities. The demand for this almond is due to the presence of coumarin or coumarin anhydride, which imparts a distinct flavor to the grain. Coumarin is also present in leaves and barks giving a characteristic aroma that can be used in cosmetics. The cumaru is also known for producing the favatonka, a widely used flavoring in the pharmaceutical industry. The cumaru seed has several properties such as anti-inflammatory, healing, bronchial dilator, aromatic, and antispasmodic (Canuto et al. 2008; Guedes et al. 2010; Quesdaroça 2017). It is used in popular medicine in the form

of tea or syrup, to relieve various ailments. Their peels are used in folk medicine for the relief of coughs, bronchitis, pulmonary emphysema, ulcers, cramps, and canker sores. The fragrance of cumaru's fava, due to its high degree of concentration, is used to perfume cigarettes, snuff, chocolates, and beverages. It is a substitute for vanilla and with great acceptance by the industry (Rêgo *et al.* 2016). From the seed is also obtained the oil that is very useful to cure the ulcers of the mouth. It is tonic of the scalp used by the Indians a long time to cure several evils. The state of Pará is the largest producer of cumaru almonds in Brazil, and Alenquer is its largest producer. According to data from the Brazilian Institute of Geography and Statistics, the cumaru production in the state of Pará corresponded to 87.5% of all Brazilian production reaching a total of 127 tons produced in 2016 (IBGE 2018; Silva *et al.* 2010). Of all the Paraense production in 2016, the municipality of Alenquer was responsible for 48.9% of the production, totaling 62 tons. However, it is observed that since 2009 the volume extracted has decreased considerably causing the municipality to lose participation, Figure 1.



Source: (IBGE 2018).

Figure 1. Production of the cumaru almond in the municipalities of Pará

Reducing the availability of the cumaru's kernel can pose a risk to communities that rely on this grain to survive. The fall may be linked to numerous situations such as forest fires and illegal logging of cumaru. It may directly impair the local extractive community who seek their livelihood in the Amazon forest. Another factor is the lack of rain. The local communities say that the production of the almond is influenced by the incidence of rain, that means, when the rain is more intense the crops are better. In view of the economic importance of the almond to these communities, this article seeks to characterize the value chain of the almond of cumaru in the community of Camburão, municipality of Alenquer, in order to assist in the creation of a cooperative in said community. The purpose of this cooperative is to promote the rational management of the extraction and to deal with the commercialization in a way that amplifies the potential of the socioeconomic transformation of the familiar farmers of the community that has in the almond a complementary source of income. Therefore, this study is important to identify means to increase the potential of local socioeconomic development, to improve the production process and value-added and, above all, to guide the sustainable management of the species in the community. This study is characterized as descriptive. The data were obtained in the Vila Camburão, rural area of the city of Alenquer-PA, due to the high productivity, and the high incidence of pickers and traders operating in the area. The data were obtained through a semi-structured questionnaire applied to the pickers and merchants of the cumaru almond, from January to February 2018. The questionnaire is made up of some strategic

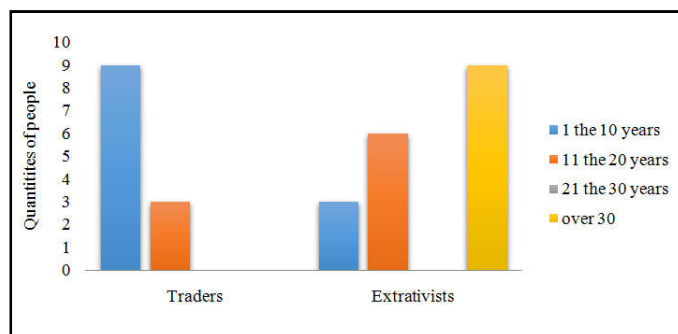
information such as: age, gender, educational level, income, place of residence. It also approaches issues as what is the price of cumaru per kilogram, the reason why they decided to work with cumaru, how many kilograms were collected during the harvest, place of sale, information on marketing, the opinion on prices, mode of harvest, conditioning and final destination. We also asked for a suggestion from the participants, and each one could propose something that would benefit local collectors and traders.

RESULTS

The data allowed forming an extended view of the problem that involves the extraction and commercialization of the almond in Vila Camburão. Based on the data collected, were verified some social problems concerning the work period, age, and level of schooling, which are:

- Low level of schooling
- Child labor
- Work Exploitation

These facts were affected by the prioritization of extractive process for the increase of the family income, or properly sole means of subsistence. Respondents argued the need to work from their youngest age to the old age because they felt they had to collaborate in the sustenance of home. The whole process of extraction, preparation and trade are carried out without precaution or training. The health care, and school conciliation are also left aside. It was noticed that many minors in the harvest period end up missing classes so that they can help out in the crops of the almond in the forest. In many cases, they decide to quit the school life because there is no conciliation between work and study. The exploitation of children's labor becomes a normal activity since there is no type of surveillance in place. Most of the interviewees do not have a complete high school education, and thus the lack of formal education hampers them to deal with the negotiation processes of their products. Figure 2 below shows the analyzes performed;

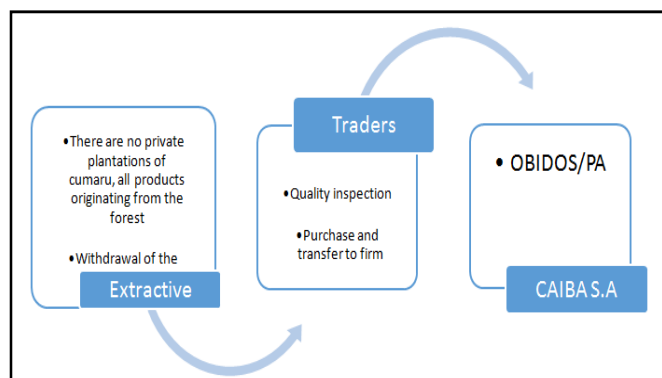


Source: Search result

Figure 2. Working time with cumaru almonds in Vila Camburão

As part of the research, it was revealed that the traders had problems in purchasing cumaru almonds because of the irregularity in price and product quality. For traders, the price of the kilogram of cumaru almond in local commerce is a major challenge in the acquisition of the product. The lack of a price list and of an almond regularization market end up bringing unequal product competition. The price of the almond is fluctuating, especially in the period between harvests. In the survey conducted, it was possible to observe a continuous

increase between the months of May and October. In this period, the price varies accordingly to the supply of the product in the region. According to the local harvestmen, the almonds begin to be sold at the price of 15 reais (R \$ 15.00) per kilogram in the month of May, R \$ 22.00 (twenty two reais) in June, R \$ 33.00 (thirty and three reais) in July, forty-five reais (R \$ 45.00) in August, fifty reais (R \$ 50.00) in September and sold for sixty reais (R \$ 60.00) in October. The appreciation achieves 75% (percent) between the first and last month of harvest, thus having an average price of thirty-eight reais and fifty centavos (R \$ 38.50). Every almond is sold directly to the local merchant of Vila Camburão, who, when buying these almonds, soon passes to the company CAIBA SA, which is based in the city of Óbidos. CAIBA S.A, in the harvest period, contracts local merchants who act as intermediaries. Traders receive a cash advance to make the acquisitions by earning one real for every kilogram of purchased kernels. This behavior forms a dependency and income transfer relationship from the harvestmen to the firm that finances intermediate buyers. However, a challenge faced by middlemen is the quality of the product. This product is mixed with stones and sand, and in many cases, crushed all in the middle of quality almonds, which makes it difficult to identify any irregularities immediately, Figure 3.

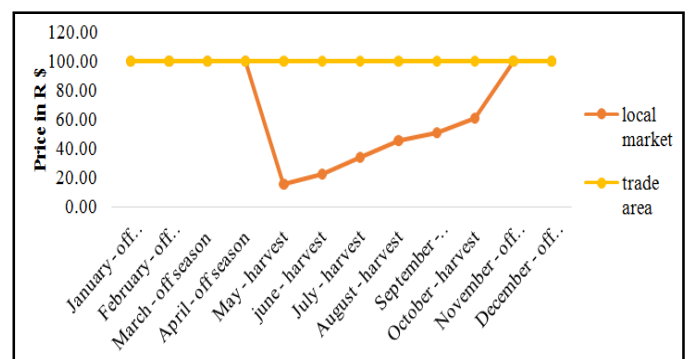


Source: Search results

Figure 3. Cumaru almond value chain

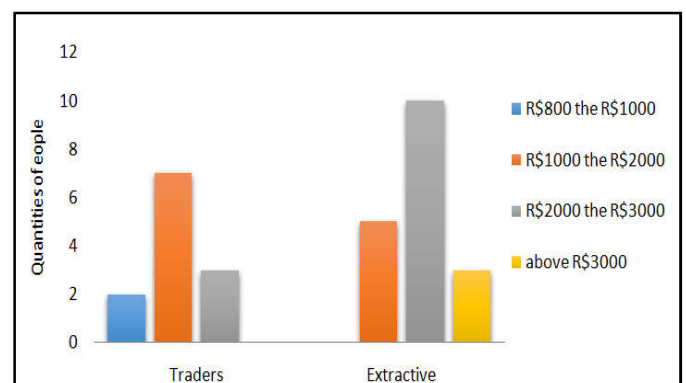
The presence of the CAIBA S.A company, coupled with the presence of many suppliers, constitutes a monopolistic scenario that affects all dynamics of the almond value chain in the community of Camburão. The conduct of this firm is observed in the difference between the prices practiced in other cities and the price charged by Vila Camburão. The average price in other cities in the state of Pará is R \$ 100.00 (one hundred reais) per kilogram, both in the harvest period and in the off-season. In contrast, in Vila Camburão there is a large price oscillation ranging from R \$ 16.00 (sixteen reais) to R \$ 61.00 (sixty one reais). A considerable difference of R \$ 84.00 (eighty-four reais) in the month of May, and of R \$ 39.00 (thirty-nine reais), in October compared to the average charged by other municipalities in the same period, as can be seen in Figure 4. The lack of knowledge, of training, of organizational structure and of incentive allow the harvestmen a small share of the profitability of commercialization of cumaru almond, Figure 5. The almond, leaving the village, becomes commercialized with wide price differentiation, ranging from R \$ 38.50 (thirty-eight reais), which is the average price charged in Vila Camburão-Alenquer / PA, to R \$ 150, 00 (one hundred and fifty reais). Data collected from the MFRURAL website show the price difference between cities in the state. In an analysis of the data obtained through field research and

bibliographical research, we can then carry out a comparison of prices among the municipalities of Pará, Figure 6. With the difference in prices among the municipalities, it is noticed that Alenquer has little expressiveness in the regional and Brazilian commerce in the sense of aggregation of value. Lack of structure, social support, and farmer incentive make these local and harvestmen traders deliver the cumaru almond virtually free to shoppers in other cities. The difference in prices, when compared to the values found in other Brazilian cities, is even more evident. Cities like Santana - AP, Osasco - SP, Belém-PA, Terra Santa - PA top the price list practiced all over Brazil. The amount charged per kilogram is about one hundred and fifty reais (R \$ 150.00). The figure below illustrates in an adapted way the values practiced in different cities of Brazil, Figure 7.



Source: Adapted from MFRURAL (2018)

Figure 4. The Price difference between the Village and other locations in the State of Pará

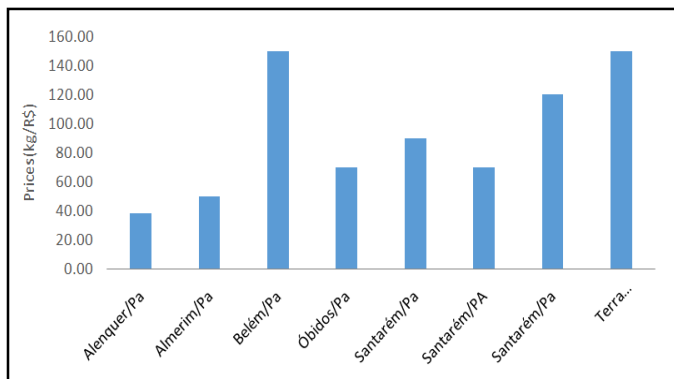


Source: Search Results

Figure 5. Profitability, difference between traders and pickers

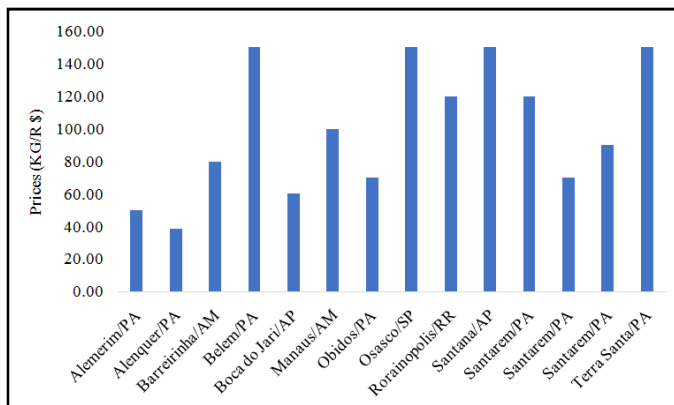
The solution for improvements in the production of cumaru almond based on local cooperation

Evidently, the resources of society are scarce. That leads the different groups to compete for the same sources of resources with strategies and tactics used by social movements, which configures, in the long run, possibilities for changes that generate growth. I also can lead them to decline. It will all depend on the structure of the society. The organization of social actors aims to guide preferred actions to achieve certain common goals. The collective organizations have presented themselves as an important tool to defend the interests of this economic sector to achieve better productive and commercial conditions. Thus, collective action is seen as a developer of the sector. It provides conditions for its progress by contributing with information, and dictating a more efficient market orientation (Simioni, Siqueira, and Binotto 2009).



Source: Adapted from MFRURAL (2018)

Figure 6. Prices charged by the companies that purchase the almond



Source: Adapted from (MFRURAL 2018)

Figure 7. Couarualmond price in different Brazilian cities

Many extractivists can find in these organizations an enterprise that allows workers with a small economy to obtain greater access to more competitive markets. It possibilities an efficient connection between work and the market, and it also allows greater development of these two links. These organizations - mostly cooperatives, unions and producers' associations - tend to attract producers because of the potential benefits they can provide (Aguiar 1992; EMANA 2009; Olson 1999; Pizarico *et al.* 2011). The good planning of these organizations can achieve high levels of horizontal integration (Firetti *et al.* 2012). In other words, the achievement of an improvement in the levels of planning, having as a tool a consistent analysis of the incentives prioritized by the associates, allows a direction of efforts. Thus, in order to be more effective in the planning of the organization, it is necessary to have a better understanding of the system. In this way, the collective organizations have a greater direction from where to invest the resources, aligned to a set of common incentives propitiating a greater collective integration. This cooperation is increasingly present, as part of solutions to various social problems, in the discussions and debates about alternatives to accelerate the economic and social development of the countries (Helfat and Peteraf 2009; Robèrt *et al.* 2002; UNIVALDO, VANIA, and ÉDNA 2014). This cooperation has the purpose of strengthening the power resource, of sharing risk and cost to explore new opportunities and of delivering superior and diverse products. In order to better orient and valorize the production of cumaru almonds in Vila Camburão, a way that would assist the valorization of local commerce would be the installation of a cooperative focused on the treatment and beneficiation of cumaru.

Advantages of the cooperative: The main advantage of the existence of agricultural cooperatives is the support to the work of rural workers. Especially for small producers, it is quite challenging to run production efficiently and competitively. When small producers join cooperatives, this is no longer a problem since large-volume outlets increase the attractiveness of the products relative to the industry and the international market. In this fact resides the importance of agricultural cooperatives: support to the small producer, in order to allow them to influence the economy in a direct and relevant way. The existence of cooperatives is also a way to supply the demand of products and to reduce the environmental impact. Instead of a large producer being responsible for an intense volume of production, several small producers make up the total production.

Management of cooperatives in Vila Camburão: Vila Camburão is a strong almond producer of cumaru in the municipality of Alenquer. Nonetheless, problems such as lack of structure, technical knowledge, conditioning and social support make all their production to be sold at low prices in comparison to the sales figures of others counties. Companies like CAIBA S.A end up buying Vila's production at super prices below the market. The possible installation of a cooperative in Vila Camburão would bring to the local residents greater influences on the almond trade of cumaru. Hence, they would have greater bargaining power and greater chances to appeal to companies from different parts of the country and even possible contracts of sale with foreign companies. Consequently, it brings an incentive in-production and turning a mirror to the other communities that also have cumaru as a source of income. For associates, the advantages of acquiring new knowledge and techniques for productive expansion becomes possible since the cooperative can seek partnerships with organizations such as the Forest Management and Certification Institute -IMAFLOA and the Forestry and Biodiversity Institute of the State of Pará - IDEFLOR-BIO. These organization provide technical support and empower farmers in family farm production. These partnerships can bring greater socioeconomic level for local residents. Such as, the local development project coming from the partnership of the two institutes mentioned above and the Alenquer-STTR-Alenquer Rural Workers' Union which, in 2015, contemplated and equipped the PDS-Paraíso community with training and the delivery of a vacuum packer, sealer and two dryers with a processing capacity of up to 40 kg / h (PDS 2018). In the number of opportunities that may be generated after the installation of the cooperative, it is possible to highlight the creation of a brand for the products produced in the village. It would consequently bring several commercial advantages to the associates, such as brand recognition in the market, marketing direct and indirect knowledge of the consumer about the origin of the product and, above all, the aggregation of value. When the consumer knows about the origin of the product and about its quality will pay with greater tranquility for a product of his confidence.

Conclusions

Given the current situation, it is possible to see that sustainability in the process of management of the almond of cumaru in the municipality of Alenquer is not taken into account as it should be. The lack of knowledge of the agents involved in commercialization and harvest, and a series of factors which involve burning, deforestation, caused the

gradual decrease in the production of cumaru almond in the municipality. Furthermore, the lack of supervision by competent bodies to curb child labor in almond exploration sites helps the school inefficiency of the students involved in harvest, as they quit school to explore the forest in order to acquire the almond for commercial purposes. However, the referential study covers issues that can change this scenario. The most important aspect pointed as the installation of a cooperative in Vila Camburão. The benefits would go beyond local residents. It also focuses on nature preservation, capacity building for sustainable management, increased production and cultivation of the species, in addition to achieving possible spaces in the national market. The search for new forms of commerce that facilitate the entire process of the productive chain and that generate market competitiveness is intense in different types of trade of products. Precisely, this is one of the possibilities that a cooperative brings to its members: place them more and more ahead in the market, give visibility and add value to their products and acquire the trust of their customers. These are one of the main lines of front of a cooperative. There is still no support for the agents involved in managing the almond of cumaru in Vila Camburão. This is what is sought when implementing a cooperative in the area, support the work developed by its members, enable them and attract more and more people interested in collective help, skilled work, recognition and market space. In this sense, new studies are needed in order to foster the structuring of this productive chain.

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