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Keywords: *agribusiness chains. factors of competitive-ness, acai chain.*

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Competitiveness Analysis of the ACAI Berry Producers of Northeastern of PARÁ

Dinaldo do Nascimento Araujo [α], Marcelo de Souza Correia [σ] & Alexandre Jorge Gaia Cardoso [ρ]

Resumo- A proposta do trabalho é identificar quais são as perspectivas de competitividade dos produtores de açaí, de terra firme e de várzea, no nordeste paraense. Região considerada como a que mais produz açaí no Brasil. O objetivo principal é descrever uma determinada amostra de produtores e identificar e avaliar as perspectivas de competitividade dessa amostra em relação aos fatores de competitividade definidos na pesquisa, partindo-se da hipótese nula de que não há diferenças significativas de perspectivas entre os produtores de terra firme e de várzea. A fundamentação teórica considerada para a pesquisa é composta de uma abordagem sobre cadeias agroindustriais e fatores de competitividade. A metodologia utilizada para a execução da pesquisa foi o método *Rapid Appraisal*, onde foi elaborado um questionário semi-estruturado para os agentes do elo de produção da cadeia do açaí. Os principais agentes-chaves considerados e caracterizados foram: produtores de açaí; intermediários e representantes de algumas organizações. Os fatores de competitividade definidos para o referido estudo foram: insumos, tecnologia, estrutura de mercado, estrutura de governança e coordenação da cadeia, armazenamento e transporte e ambiente institucional. Como principal resultado do trabalho, observou-se que em ambos os tipos de produção, as perspectivas de competitividade são favoráveis para o aprimoramento da cadeia e não há diferenças significativas entre as percepções de competitividade dos produtores de terra firme e de várzea.

Palavras-chaves: cadeias agroindustriais. fatores de competitividade. cadeia do açaí.

Abstract- The purpose of this study is to identify what the perspectives of competitiveness by rural production of acai are, from terra firme and várzea in northeast Pará. Region considered the one that produces the most acai in Brazil. The main objective is to describe a certain sample of producers and to identify and evaluate the competitiveness perspectives of this sample in relation to the competitiveness factors defined in the research, starting from the null hypothesis that there are no significant differences in perspectives between terra firme and várzea producers. The theoretical basis considered for the research is composed of an approach on agrichain and factors of competitiveness. The method used for the execution of the research was the Rapid Appraisal, where a semi-structured questionnaire was prepared for the agents of the acai production chain. The main key agents taken into consideration and characterized were: Producers of acai; intermediaries and representatives of some organizations. The competitiveness factors defined for this study were: Inputs, technology, market structure, governance structure and chain coordination, storage and transportation, and institutional environment. As the main result of the work, it was observed that in both types of production, the perspectives of competitiveness are favorable for the improvement of the chain and there are no significant differences between the perceptions of the types of producers from terra firme and várzea.

Keywords: agribusiness chains. factors of competitiveness, acai chain.

I. Introduction

In 2019, the Brazilian production from vegetable extraction and from Brazil food forestry corresponds to the amount of 679,298 tons, of which 362,545 tons or 53.37% are from the production of yerba mate and 222,706 tons or 32.78% are from the extraction of the acai berry. From the portion of acai production in 2019, the North region is the largest producer with 205,116 tons and from this North production, the state of Pará has a share of 74% and produces 151,793 tons and the state of Amazonas produces 43,855 tons or 21.38%. Between 2002 and 2019, in Pará, the average production was 80.18% compared to the North of the country (IBGE, 2021).

The extractive production of acai in the North Region increased by 24.09% between 2002 and 2019. In the State of Pará, in the same period, the production increased from 122,322 tons to 151,793 tons, with an average of 80.18% of the production of the North Region during the period. In Pará, the main producing mesoregions from 2002 to 2019 are in the Northeast with an average of 70,072 tons (which represents an average share of Pará production of 59.88%), followed by the Marajó mesoregion with an average of 33,975 tons (which represents an average share of Pará production of 30.11%) according to IBGE (Brazilian Institute of Geography and Statistics) data. This fact was identified in the studies by Cardozo et al (2015) where the acai palm tree is point out as the most representative species in the agroforestry systems of the Amazon with a percentage of 25.9% of representativeness.

The data presented demonstrate a strong growth in production in order to serve both the domestic and foreign markets. They also demonstrate that the acai production chain has been able to meet the growing demand and, therefore, indicate its ability to remain competitive in the market. That is, the production growth in this chain reveals a “performance”, which can

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be interpreted as an indicator of revealed competitiveness.

In this chain, there are several economic agents, such as acai producers, intermediaries or middlemen, processing industries, organizations linked to these agents and the government with its policies. According to Nogueira, Figueiredo e Muller (2005), the production of acai berries, originated almost exclusively from extractivism. As of the 1990s, it also began to be obtained from acai plantations native to várzea, from cultivation located in várzea and terra firme areas. The terra firme production has been obtained in regions with higher rainfall, in sole and multiple systems, with and without irrigation. And for Homma (2012) the acai berry can come from the following origins: From native acai plantations existing on the banks of rivers mixed with other trees (extractive); from várzea areas that have undergone management and from areas of terra firme production with irrigation and without irrigation.

The acai producers are those who carry out some type of management in the acai plantations and somehow benefit the acai plantation, taking better advantage of the collection of the berry even in the off-season, as well as extracting the heart of palm.

Most producers work and live on the banks of rivers (known as riparian people). After collecting the berry, the producers allocate the acai to: Intermediaries, associations, cooperatives or processing industries. After processing the berry, the industry sells the pulp to distributors that are located in several states of Brazil, mainly in the Southeast and South regions. With respect to international market, there are few companies in the Northeast region of Pará that export, and according to the data prepared by the National Supply Company – CONAB (2019), the United States of North America with an average representation of 60% and Japan with an average representation of 35%, are the countries that from 2012 to 2019 are the top importers of acai pulp.

In the face of this context, the importance of the competitiveness study of the respective production chain in the Northeast of Pará is revealed, arising as a fundamental question: What were the changes in the perspectives of competitiveness by the producers of terra firme and várzea in the acai berry production chain? Thus, this study presents as a general objective to describe a certain sample of producers and identify and assess the perspectives of competitiveness of this sample in relation to the competitiveness factors defined in the research.

The studies already carried out by Canto (2001); Nogueira, Figueiredo and Muller (2005); Sant'ana (2006); Lewis (2008); Corrêa (2010); Nogueira (2011), Batista (2013) and Cardozo et al (2015) present an approach on the palm tree of acai, on the properties of the berry, on the management techniques and on some economic aspect of certain locations. An analysis of the main factors of competitiveness by producers enables to identify the strengths and weaknesses of the production link of the acai chain.

II. Theoretical Basis

a) Production chain systemic approach

The two main aspects that contributed to this analysis of the acai chain, although distinct, but with a common ground, are: (a) *CSA-Commodity System Approach*, which considers the transformations that a raw material undergoes until it reaches the final consumer; and (b) the analysis of *filière*, which analyzes the succession of transformation processes of a given product of a given agro-industrial sector, in a vertical layout.

Usually, the approaches of competitiveness find their privileged space for analysis in the firm. Thus, the competitiveness of a given sector or nation would be the sum of the competitiveness of the agents (firms) in it. In the case of agricultural or agro-industrial products, there is a set of specificities that result in the definition of a space of analysis different from those conventionally admitted in competitiveness studies. This space of analysis is the agro-industrial production chain.

Competitiveness studies in agro-industrial chains should privilege a vertical cut in the economic system for defining the field of analysis. In these cases, the competitiveness of this open system, defined by a given agro-industrial production chain, cannot be considered as the mere sum of the individual competitiveness of its agents. This consideration refers to the analysis of competitiveness of agro-industrial systems, which implies the incorporation of the notion of system (BATALHA; SOUZA FILHO, 2009).

For Batalha e Silva (2007), an agro-industrial production chain can be segmented from downstream to upstream into three macro segments. However, this task is not so easy, since this division can vary greatly from product to product and according to the proposed objective of the analysis. The first segment would be trading, where companies responsible only for distribution logistics can be included, that is, companies that relate directly to the end customers of the production chain and that enable consumption and trading. In the second segment would be industrialization, including the raw material processing industries in final products intended for buyers (which can be final consumers or other agro-industries). The third segment, the production of raw materials would be the cluster of companies that supply the raw material to the processing industry.

Batalha e Souza Filho (2009) emphasize that efficiency along the distribution channel can be improved through information sharing and joint planning among its several agents. Distribution channel mentioned here could be understood, for example, as the path taken by the acai berry, from the extraction of

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the berry of the palm tree to the table of the final consumer. This concept is relevant to the study of production chains, as it focuses on the coordination and integration of activities related to the flow of products, services and information between the different agents of the chain.

In this sense, a specific analysis was made in the production link, with the main key agents, considering the perspectives of producers and the opinions of intermediaries and representatives of organizations that are somehow linked with the production of the berry, and with their experiences and expertise in the subject, helped to clarify important points about the chain.

b) Competitiveness in agro-industrial systems

For Farina (1999), the systemic analysis of a given agro-industry is justified due to the fact that the performance that is proposed to be studied is not of an individual firm, but of a set of segments/players that are directly or indirectly interrelated with a particular purpose and in a systemic way. These players segments can exhibit different degrees of mutual dependence.

Considering the concept of competitiveness applied in an agro-industrial system, there is a first difficulty, which is to know the level of aggregation of the links that make up a given system, since it is not just a question of understanding the concept of competitiveness horizontally (from the firm to the industry), but also of understanding competitiveness vertically (from industry to the production chain).

For Farina & Zylbersztajn (1998) and Batalha e Souza Filho (2009), agro-industrial systemic analysis becomes feasible when focusing on specific agro-industrial systems (SAG) such as milk SAG, sugarcane SAG, etc.. From the point of view of Farina (1999), the analysis of competitiveness of SAGs should ask: Whether a given agro-industrial system shall grow or, at least, not decrease in current markets and whether it has the capacity to add new markets; whether its composition will change or not, that is, whether the competitiveness of the participants of the links will undergo changes or not; Which governance structures make this competitiveness feasible and in which direction it shall change.

As a result of these explanations, we identify that the acai chain generates added value, and the analysis that this work proposes may become a start line for the local and regional improvement of the acai chain in the future, contributing with knowledge on the functioning and interaction of their respective chain agents and links.

c) Competitiveness factors

The company that acquires greater competitive advantage, compared to the others, stands out, obtaining more positive results in terms of profitability and growth. For such a favorable position in competitiveness, companies should know and master the factors of competitiveness.

Roman et al (2012) understand as a factor of competitiveness what is configured as a real concern and reason for being of each activity of the company. It can be said that the competitiveness factor corresponds to the variables in which the organization needs to have a good performance in order to survive and stand out in relation to the market.

Thus, in the present study of competitiveness factors in the production link of the acai chain, we agree with the proposal of Roman et al (2012) in which the knowledge of competitiveness factors will enable to identify the environmental requirements, the internal structure and the levels of uncertainties in that link.

According to Batalha e Souza Filho (2009), the determinants of competitiveness in production chains involve a wide variety of dimensions, which, for analytical convenience, can be aggregated into drivers, such as technology, inputs and infrastructure, management, institutional environment, market structure and governance structure. They ultimately reflect the competitive and sustainable positioning of the system under analysis. The measurement of these drivers can be done objectively through the use of public or private domain statistical information and/or data collected directly from the agents participating in the agro-industrial system.

In this study, we considered six dimensions of competitiveness factors described in Batalha e Souza Filho (2009) and each factor is composed of subfactors according to the specificities of the analyzed chain, as listed below.

1) Input factor: Labor training, land availability, land price in Pará, labor cost, production cost, storage cost and weather conditions;
2) Technology Factor: Management, várzea cultivation and terra firme cultivation;
3) Market Structure factor: Number of industries, acai berry price, product differentiation, capacity to increase and production scale, idleness in processing and quality certification;
4) Governance and Coordination Structure Factor: Existence and action of associations and cooperatives, participation of intermediaries, dissemination of information, intermediary/producer relationship, producer/industry relationship;
5) Storage and Transportation Factor: Berry storage capacity, pulp storage capacity, the conditions of ports, the capacity of ports, the conditions of highways, the capacity of highways and the safety of ports and highways;
6) Institutional Environment factor: Credit availability, access to credit, differentiated interest rates, partnership with research centers, legalization of production areas, governmental actions, health legislation, action of the inspection service, berry

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handling training, use of straw baskets (sieves), use of plastic crates and chagas disease.

III. Methodology

Regarding the approach and nature of the research, it is classified as qualitative and quantitative descriptive, aiming to investigate the perspectives of key agents related to the links of production of the acai berry in relation to competitiveness factors.

In this study, we decided to delimit the analysis in the Northeast mesoregion of Pará, which was the region with the highest volume of extractive production in the last twelve years.

For this research, the method *Rapid Appraisal* (RA) was used, which had been used in previous works by Pinazza (2008), Batalha e Souza filho (2009), Melz (2010) and Barchet (2012). The RA also known as rapid rural appraisal, has been applied to respond to the disadvantages of traditional research approaches applied in the studies of production chains. This method is widely used in analysis of agro-industrial systems, mainly in the execution of short-term and comprehensive studies, limitation of financial resources and primary data.

The RA is also characterized by the application of a semi-structured questionnaire, which is designed to generate a quick documentation that aims to evaluate the most important components to be considered, as well as reduce the costs of research with large volumes of data (SILVA; SOUZA FILHO, 2007).

The research was applied in the period from July to September 2016 and the sampling process adopted was the intentional non-probability (convenience sampling) for acai producers, whose population is unknown.

Table 1 shows the number of producers who were interviewed and provided information for the analysis. In addition to the producers, five intermediaries selling the berry and nine representatives of organizations directly or indirectly related to the chain were interviewed to provide further information on the above-mentioned chain.

Table 1: Sample of interviews conducted with producers of the chain

Key agents	No. of interviewees	Location/city
Terra firme producers (with or without irrigation)	10	Tomé-Açu; Inhangapi;
Várzea producers	10	Cametá; Igarapé-Miri
Total number of producers interviewed	20	

Source: Own authors

The semi-structured questionnaire was composed of competitiveness drivers that enable the understanding of the aggregate effect and that can be measured through performance indicators or competitiveness subfactors, where, the interviewee assigned an assessment by a *likert* scale for each question related to a competitiveness subfactor.

The *likert*-type scale has a variation from "very unfavorable" (VU) = -2 to “very favorable” (VF) = +2 to competitiveness. Intermediate values are: "unfavorable" (U) = -1, “neutral” (N) = 0 and “favorable” (F) = 1, as shown in Figure 1. Thus, the subfactors can be assessed qualitatively and quantitatively, considering equal importance weights for all, since the interviewees could have little systemic view of the chain or little knowledge (expertise) about other links in the chain.

Very Unfavorable	Unfavorable	Neutral	Favorable	Very Favorable
VU ≤ -1.5	-1.49 ≤ U ≤ -0.5	-0.499 ≥ N ≤ 0.499	0.5 ≤ F ≤ 1.499	1.5 ≤ VF

Source: Own authors

Figure 1: Scale *Likert* for the assessment of competitiveness factors and subfactors

The assessment of competitiveness factors corresponds to the average sum of subfactors of the same type, and using the same *likert* scale from Figure 1, the factors qualitative assessment was obtained.

IV. Results

This section presents the perspectives of terra firme and várzea producers on the competitiveness of the acai chain, according to the competitiveness factors established in this work.

a) Inputs

According to Figure 2, in the final competitiveness assessment of the input factor, terra firme producers consider neutral (N) = 0.41 and várzea producers as favorable (F) = 0.61 for competitiveness.

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Inputs	Terra firme	Várzea
Labor Capacity	0.10	0.60
Lands availability	0.90	1.10
Land price in PA	1.00	0.40
Labor cost in production	-0.70	-0.20
Production cost	0.20	0.60
Storage cost	1.00	
Weather conditions	0.40	1.00
Assessment	**0.41**	0.80 **0.61**

Source: Field research

Figure 2: Competitiveness assessment of the Inputs factor and subfactors

b) Technology

According to Figure 3, in the final competitiveness assessment of the technology factor, terra firme producers consider favorable (F) = 0.87 and várzea producers as favorable (F) = 1.03 for competitiveness.

Technology	Terra firme	Várzea
Management	1.30	1.10
Várzea cultivation	1.60	1.80
Terra firme cultivation	-0.30	0.20
Assessment	0.87	1.03

Source: Field research

Figure 3: Competitiveness assessment of the Technology factor and subfactors

c) Market structure

According to Figure 4, in the final competitiveness assessment of the market structure factor, terra firme producers consider favorable (F) = 0.57 and várzea producers as favorable (F) = 0.55 for competitiveness.

Market	Terra firme	Várzea
No. of processing industries	0.40	0.20
Acai berry price	1.40	1.70
Product differentiation	0.40	0.70
Capacity to increase the production scale	1.00	0.70
Idleness in berry processing	-0.70	-0.90
Quality certification	0.90	0.90
Assessment	0.57	0.55

Source: Field research

Figure 4: Competitiveness assessment of the Market structure factor and subfactors

d) Governance and coordination structure

According to Figure 5, in the final competitiveness assessment of the governance structure and coordination factor of the chain, terra firme producers consider favorable (F) = 0.52 and várzea producers as neutral (N) = 0.46 for competitiveness.

Governance and Coordination	Terra firme	Várzea
Existence and action of Associations/cooperatives	0.60	0.20
Participation of intermediaries	-0.20	1.00
Dissemination of information	1.00	0.30
Intermediary relationship	0.20	0.60
Producer/industry relationship	1.00	0.20
Assessment	0.52	0.46

Source: Field research

Figure 5: Competitiveness assessment of the Governance and coordination structure factor and subfactors

e) Storage and transportation

According to Figure 6, in the final competitiveness assessment of the storage and transportation factor, terra firme producers consider neutral (N) = 0.33 and várzea producers as neutral (N) = 0.13 for competitiveness.

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Storage and transportation	Terra firme	Várzea
Berry storage capacity	0.80	1.10
Pulp storage capacity	0.70	0.10
Industry location	0.50	0.10
Transportation of natural berry	0.80	1.10
Transportation cost of the domestic M. berry	1.00	0.20
Transportation cost of the foreign M. berry	0.00	-0.20
Ports conditions	-0.20	-0.20
Ports capacity	-0.20	-0.20
Highways conditions	0.80	0.20
Highways capacity	0.40	0.20
Safety of highways/ports	-1.00	-1.00
Assessment	0.33	0.13

Source: Field research

Figure 6: Competitiveness assessment of the Storage and transportation factor and subfactors

f) Institutional environment

According to Figure 7, in the final competitiveness assessment of the storage and transportation factor, terra firme producers consider neutral (N) = -0.04 and várzea producers as neutral (N) = -0.15 for competitiveness.

Institutional Environment	Terra firme	Várzea
Credit availability	- 0.40	0.00
Access to credit	-0.90	-0.40
Differentiated interest rates	-0.10	-0.20
Partnership with research centers	0.70	0.30
Legalization of production areas	-0.90	-1.40
Governmental actions	-0.30	-0.50
Health legislation	0.30	0.00
Action of the inspection service	-0.20	-0.20
Berry handling training	0.80	0.90
Sieves/Rasas	0.50	0.20
Plastic crates (plastic boxes)	1.10	0.90
Chagas disease	-1.10	-1.40
Assessment	- 0.04	-0.15

Source: Field research

Figure 7: Competitiveness assessment of the Institutional environment factor and subfactors

V. Final Considerations

Within the perspectives of terra firme and várzea producers, the competitiveness factors with a positive impact on the chain are inputs, technology, market structure and governance and coordination structure. The factors with neutral impact for competitiveness are storage and transportation and the institutional environment.

The results point out an important aspect in socio-environmental management learning, both types of producers indicate a favorable competitiveness in the production link of the chain and enable both types of production, terra firme and várzea, to complement each other. Although production costs are different, and more expensive in terra firme planting, from new investments and new public policies to increase the scale of terra firme production, this type of development could increase the sustainability of the chain, which is currently satisfactory in the várzea environment.

Also as a result of the effort to understand part of the acai chain, positive and negative aspects can be observed, according to the perceptions of the agents interviewed. The positive aspects are: Producers have better access to health care and education; acai is the main source of income of producers; most producers carry out management, providing an increase in the amount produced; new techniques of berry collection in terra firme acai plantations are being widespread; associativism and cooperativism, although incipient, have shown favorable results for producers and the trading centers are defined.

The negative aspects are: Threat to the environment through intensive and irregular management; there is still the use of child labor in the collection of the berry; the precariousness of property rights in production or extraction areas prevents new investments by the producer; intermediaries exert strong influence in determining the price of the berry; the roads and ports in the region have precarious conditions for transshipment and security; and there is still a smaller scale of contamination of acai by chagas disease in some locations in Pará that do not comply with health regulations.

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It was observed that acai producers work in difficult conditions, living in locations far from large urban centers and still need basic services such as sanitation.

During the research, the access to interviewees was difficult due to the restrictions of schedules and far location. Although the scientific rigor was followed to achieve the results, the study was limited to a limited sample of producers from some locations and the limited number of competitiveness factors and subfactors.

Thus, as a suggestion for future research and actions, the increase in the number of key agents to be interviewed in that chain and the identification of policy instruments and agents responsible for the execution are suggested. Thus, the study of the other links of the acai production chain can contribute systemically to the better understanding of its functioning.

References Références Referencias

1. Barchet, Isabela. Avaliação da competitividade da cadeia produtiva de carne ovina no Rio Grande do Sul. Dissertação de mestrado. Universidade Federal de Santa Maria, 2012
2. Batalha, M. O. Silva, A. L. S. Gerenciamento de sistemas agroindustriais: Definições, especificida des e correntes Metodológicas. In: BATALHA, M. O.e LIMA, E. F (Coord.) Gestão Agroindustrial, v.1, 3ª Ed. São Paulo, Atlas, 2007.
3. Batalha, Mário Otávio; Souza Filho, Hildo Meirelles de. Agronegócio no Mercosul: uma agenda para o desenvolvimento. São Paulo: Atlas, 2009.
4. Batista, Katharine Tavares. Avaliação da sustentabilidade de agroecossistemas familiares agroextrativistas de açaizeiros na região das ilhas do município de Cametá, Pará. Dissertação de mestrado. Universidade Federal do Pará. Núcleo de Ciências Agrárias e Desenvolvimento Rural, 2013.
5. Canto, Sérgio Aruana Elarrat. Contribuição da ergonomia com base na análise postural durante a coleta dos frutos. Dissertação de mestrado. Universidade Federal de Santa Catarina. Programa de Pós-Graduação em Engenharia de Produção. Santa Catarina, 2001.
6. Cardozo, Ernesto Gómez. Muchavisoy, Henry Mavizoy. SILVA, Hulda Rocha. Zelarayán, Marcelo Luís Corrêa. LEITE, Márcio Fernandes Alves. Rousseau, Guillaume Xavier. Gehring, Christoph. Species richness increases income in agroforestry systems of eastern Amazônia. Agroforestry Systems. Springer. July, 2015. Doi 10.1007/s10457-015-9823-9.
7. Companhia Nacional De Abastecimento – Conab. Conjuntura de açaí de 01 a 30 de abril de 2016. Available in <http://www.conab.gov.br/OlalaCMS/uploads/arquivos/16_05_09_11_55_19_conjutura_de__acai_abr_-16-1.pdf>. Accessed in July, 2021
8. Corrêa, Rosivanderson Baia. Do território recurso ao território abrigo: modo de vida e o processo de valorização do açaí no município de Cametá-PA. Dissertação de mestrado. UFPA. Belém, 2010.
9. Farina, Elizabeth M.M.Q. Zylbersztajn, Decio. Competitividade no agribusiness brasileiro: introdução e conceitos. São Paulo: PENSA/FIA/FEA/USP, 1998
10. Farina. Elizabeth M. M. Q. Competitividade e Coordenação de Sistemas Agroindustriais: Um ensaio conceitual. Revista Gestão e Produção. V6, n. 3, Dez, 1999, P. 147-161.
11. Homma, Alfredo K. O.. Entrevista para o site opinião & Notícia. Açaí: o ouro negro pode ser um vilão para a Amazônia? Aumento do consumo poderia representar risco para a floresta, dizem veículos da mídia internacional. Repórter Fernanda Dias. 13 de março de 2012. Available at < http://opiniaoenoticia.com.br/brasil/acai-o-ouro-negro-pode-ser-um-vilao-para-a-amazonia/>. Accessed in Jun/2017
12. Instituto Brasileiro De Geografia E Estatística - Ibge. Available at: <http://www. ibge.gov.br>. Accessed on: April 15th, 2021.
13. Lewis, Jeniffer A.. The power of knowledge: information transfer and açaí intensification in the peri-urban interface of Belém, Brazil. Agroforestry Systems. November, 2008
14. Melz, Laércio Juarez. Competitividade da cadeia produtiva de carne de frango em Mato Grosso: Avaliação dos segmentos de avicultura e processamento. Dissertação de mestrado. Dep/Ufscar. São Carlos, 2010.
15. Nogueira, Ana Karlla Magalhães. As tecnologias utilizadas na produção de açaí e seus benefícios socioeconômicos no Estado do Pará. Dissertação de mestrado. Universidade Federal Rural do Pará. Ciências florestais. 2011.
16. Nogueira, Oscar Lameira. Figueiredo, Francisco José Câmara. MULLER, Antônio Agostinho. Açaí. Sistemas de produção 4. Belém: Embrapa Amazônia Oriental, 2005.
17. Pinazza, Gustavo Galvão de. Análise da competitividade da cadeia produtiva da soja no Brasil vis-à-vis os demais países exportadores Sul-Americanos. Dissertação (Mestrado em Engenharia de Produção) - Departamento de Engenharia de Produção, Universidade Federal de São Carlos, 2008.
18. Roman, Darlan José. PIANA, Janaina. Lozano, Marie Anne Stival Pereira e Leal. Mello, Nelson Ruben de. Erdmann, Rolf Hermann. Fatores de competitividade organizacional. Brazilian Business Review. V.9, n.1, Vitória, Jan-Mar, 2012.
19. Sant'ana, Karla Christine Tavares de. Mercado justo e solidário como contribuição ao desenvolvimento sustentável: um estudo das representações

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econômico-sociais do comércio do açaí pelo município de Codajás. Dissertação de mestrado. Universidade Federal do Amazonas – UFAM. Programa de Pós-Graduação em Ciências do ambiente e sustentabilidade da Amazônia. 2006.

20. Silva, Carlos A. da. Souza Filho, Hildo M. de. Guidelines for rapid appraisals of agrifood chain performance in developing countries. Agricultural management, marketing and finance occasional paper. Food and agriculture organization of the united nations. Rome, 2007.

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