ISSN: 2359-1048
Novembro 2021

SUSTAINABLE ENTREPRENEURSHIP IN AGRIBUSINESS: A CASE STUDY IN A BRAZILIAN AGRO-INDUSTRIAL COOPERATIVE

DAIANE JOHANN

GABRIELA ALMEIDA MARCON NORA

CARLOS EDUARDO RAMOA

ELIANA ANDRÉA SEVERO
UNIVERSIDADE FEDERAL DE PERNAMBUCO

Introdução
Agribusiness can be understood as the production and distribution operations for agricultural supplies. This industry is of great importance for Brazilian socio-economic development since it is one of the pillars of GDP, representing about 25% of GDP and 50% of exports. According to the UN, the world population remains in the process of growth, just as it occurs in Brazil. The increase in the world population directly reflects food consumption and the search for a better quality of life. This scenario demands an evaluation of our current economic model.
Problema de Pesquisa e Objetivo
The research question is: How can sustainable entrepreneurship in the local agrarian environment contribute to fostering sustainable practices? It is fair to state that sustainable entrepreneurship can transform the lives of families and the production landscape in which they operate. In this context, the study aims to identify and analyze sustainable practices in an agribusiness cooperative, correlating them to sustainable development goals (SDG) in the 2030 Agenda.
Fundamentação Teórica
The sustainability issue in this century assumes a central role in the reflection on the dimensions of development and the alternatives presented. The use of environmental practices by organizations is a global trend, as they increasingly realize the strategic importance of the theme (Veiga, 2010). Sustainable entrepreneurship is an integrated vision that has been emerging in the last decade in academic literature and is a combination of economic, social, and environmental value creation (Cohen & Winn, 2007, Dean & Mcmullen, 2007, Schaltegger & Wagner, 2008, Binder & Belz, 2015).
Metodologia
This study was carried out in an agro-industrial cooperative in the north of Rio Grande do Sul – RS (a state in the south of Brazil that is very well known for its significant participation in the national agribusiness production). The cooperative will have its name preserved and named in this study as Cooperative X. Primary data collection was carried out through semi-structured interviews in July of 2020 with the Environmental Coordinator of the Cooperative. Secondary data with observation, analysis of documents by consulting the cooperative's website, documents, and internal controls.
Análise dos Resultados
As an environmental policy, the Cooperative aims to minimize environmental impacts in the development of products and services and promote environmental education actions. The activities are organized on an environmental agenda and are based on four objectives: 1 - Legal compliance (compliance with current environmental legislation); 2 - Eco-efficiency and clean technologies; 3 - Environmental Awareness; and 4 - Continuous Improvement. It was possible to identify a series of good environmental practices of Cooperative X. Two main groups were identified.
Conclusão
Through cooperation and aggregate processes, the management of social issues increases the bond between organizations and society, even if conflicts among stakeholders may occur. The transformative effect of the agricultural revolution of the last 40 years is a crucial fact in Brazil's recent economic history. It continues to open perspectives for the future. The results showed that the cooperative maintains permanent actions to develop the communities in which it operates, with an influential role in environmental education and eco-efficiency related to the SDG.
Referências Bibliográficas
Aghelie, A., Sorooshian, S., &Azizan, N. (2016). A. Research gap in sustainable Entrepreneurship. Indian Journal of Science and Technology, vol. 9, n. 12, p. 1-6. Alves, A. O., & Leal, A. C. (2003). Pressupostos teóricos e metodológicos do planejamento ambiental. Formação (Online), 1(10). Bansal, P. (2005). Evolving sustainability: A longitudinal study of corporate sustainable development. Strategic Management Journal, v. 26, n. 3, p. 197-218, 2005. Barbiere, Jc; Simanton, Ma. Organizações Sustentáveis Inovadoras. São Paulo: Atlas, 2007. Barbieri, Jc Corporate social responsibility and sust

Palavras Chave
Sustainable Entrepreneurship, Sustainable Development, Brazilian Agro-industrial Cooperative

1 INTRODUCTION

Agribusiness can be understood as the production and distribution operations for agricultural supplies, operations, storage, processing, and distribution of cultivated products and their derived items. This industry is of great importance for Brazilian socio-economic development since it is one of the pillars of Gross Domestic Product (GDP), representing about 25% of GDP and 50% of exports. According to the United Nations, the world population remains in the process of growth, just as it occurs in Brazil. The increase in the world population directly reflects food consumption and the search for a better quality of life.

The dimensions of agribusiness in production, human development, explored the area, and employed technologies are of great relevance for a productive area. Accounts, as stated, for more than 20% of the national GDP, have grown 3.81% in 2019, with the predominance of rural class in Brazil, if we consider agribusiness as a promising sector of the Brazilian economy (MAPA, 2020). Despite the impacts suffered by the 2018 truck drivers' strike and an unstable external scenario, the agribusiness arrives in 2020 with a more heated activity, emphasizing meats, with high exports to China. In the sugar and alcohol sector, with the production of sugar and ethanol, agricultural production only should rise about 3,4%, compared to the previous year, according to the Ministry of Agriculture, Livestock, and Supply (MAPA, 2020).

One of the goals of sustainable development (SDG) of the UN Global Agenda is, by 2030, to achieve sustainable management and efficient use of natural resources. The increase in the world population directly reflects food consumption and the search for a better quality of life. As a result, the green food production process stands out. That is, sustainable enterprises adopt production actions based on socio-environmental development. This scenario requires a parsimonious analysis of the current development model, which focuses on the quantitative growth of the economy.

The United Nations (UN) predicts that the world population of 7.7 billion people will continue to increase in the coming decades. According to the report World Population Perspectives: The 2017 Review, the population growth forecast is coming to 8.3 billion in 2030 and 8.9 billion in 2050. After that, the global population will stabilize at around 9 billion.

The global scenario is one of population growth. Moreover, the production and consumption of food, consequently, also needs to grow. The challenge for the world will be to meet the increased demand for food in these growing economies, driven by the increase in world population. Furthermore, in the context of climate change and socio-environmental challenges, this growth cannot be separated from policies aimed at protecting the environment. In 2015, 193 UN member countries committed to the 2030 Agenda, which provides for the 17 goals of sustainable development, broken down into 169 global goals that each country or organization can adapt. We highlight here SDG number 2, which concerns the fight against hunger and poverty. Moreover, we could have highlighted others, such as SDG 12, which concerns sustainable consumption and production, as they are all interconnected.

In Brazil, the Brazilian Institute of Geography and Statistics (IBGE) estimates that by 2030 there will be a growth of more than 14 million people, bringing the country's population to around 223 million (IBGE, 2017). According to FAO (2021), more than 70% of the Brazilian population has some degree of food insecurity, according to data from the Brazilian Research Network on Food and Nutritional Sovereignty and Security (REDE PENSAN). Food insecurity in the world has been growing since 2014. Due to the economic recession, Brazil is one of the world's leading producers and has produced enough food to supply its domestic market and much external demand. According to information from the United States Department of Agriculture (USDA), Brazil is currently the largest exporter of meat (beef and chicken), soybeans, sugar, orange juice, and coffee; in addition to being among the leading exporters of cotton, corn, fruit, pork, and forestry sector products.

Sustainable development consists of reconciling the laws of nature with the laws of economics (Zak, 2015). The unsustainability occurring over the last three centuries is the result of human activities and comes from two crises, one environmental and the other social. This unsustainability is attributed to the model of technological and economic development existing in the world and is directly related to and society's customs. As characteristics of the model, there is the excessive consumption of goods and services, which affects the aesthetic and sanitary conditions of the environment (Alves & Leal, 2003).

It is visible in this scenario the impossibility of remaining with the current development model. It is necessary to move towards a type of development that integrates the social, environmental, and economic dimensions, which is inclusive, offers security and sustainability (Sachs, 1994; Elkington, 2012). A global trend is green businesses, that is, sustainable enterprises that have production actions based on social and environmental development, which promotes improvements in communities and organizational sustainability (Souza, 2020).

Studies on social entrepreneurship (Zahra et al., 2009) and environmental entrepreneurship (Schaper, 2002) started to be developed earlier and can be considered as precursors of sustainable entrepreneurship (Hockerts & Wustenhagen, 2010). This source paths nearby, social and environmental, but not identical, and the development, still incipient, sustainable entrepreneurship led to difficulties in the delimitation of the subject and research gaps to be exploited in this regard highlights the importance and relevance of studies on sustainable entrepreneurship, the central theme of this research.

This industry is eventually involved in environmental controversies and, rightly so, brings excellent opportunities for sustainable entrepreneurship. Sustainable entrepreneurship refers to discovering, creating, and exploiting entrepreneurial opportunities that contribute to sustainability by generating social and environmental gains for others in society.

In this perspective, according to Schumpeter (1934), entrepreneurship, which has always been seen as an agent of social transformation, mainly for economic growth, came to be also considered as a vehicle that can collaborate with sustainable development (DEAN; Mcmullen, 2007; Kuckertz & Wagner, 2010). *Sustainable entrepreneurship* is the detection, development, and exploration opportunities connected to social and environmental niches that generate socio-economic or environmental improvement, attracting the attention of governments, entrepreneurs, and researchers (Hockerts & Wustenhagen, 2010; Shepherd & Patzelt, 2011). The research question is: How can sustainable entrepreneurship in the local agrarian environment contribute to fostering sustainable practices? It is fair to state that sustainable entrepreneurship can transform the lives of families and the production landscape in which they operate. In this context, the study aims to identify and analyze sustainable practices in an agribusiness cooperative, correlating them to sustainable development goals (SDG) in the 2030 Agenda. In addition to this introduction, the article is structured in the following sections: i) theoretical framework, covering: agribusiness in Brazil, sustainable development and sustainable entrepreneurship; ii) methodological procedures; iii) results and discussions; and, iv) conclusions.

2 THEORETICAL FRAMEWORK

In the following topics, we present a brief theoretical framework that supports the analyses.

2.1 Agribusiness in Brazil

The Institute of Applied Economic Research (IPEA), in 2020, predicts the GDP growth in the sector of agribusiness of 3.4% growth driven by rural credit subsection (IPEA, 2020).

Progressively, agribusiness becomes the most critical sector for economic, technological, political, and social activities. With the production, processing, distribution, and consumption of animal and vegetable products, agribusiness becomes relevant. This segment is the engine for the growth and stability of the Brazilian macroeconomics, which impacts the reduction of the trade deficit of other productive sectors (Gasques et al., 2004).

Brazil has a total available arable area estimated at 152.5 million hectares or 17.9% of the territory, and of these 57.3 million hectares or 7.3% of the territory is constituted by the arable area already used. There is a potential for agricultural expansion corresponding to 90 million hectares or 10.5% of the territory, corresponding to the available arable areas and not yet used (Brazil, 2016).

In Brazil, a country of rural aptitude, from the 16th to the 18th century, the predominance of the economy occurred through the cycles of pau-brasil, sugarcane, gold and livestock, with the economic policy established in Portugal that, until then, maintained Brazil as a colony. Many transformations took place. The country had the heyday of coffee, for example. In addition, there was an intense process of mechanization of agriculture and livestock. From the 1980s onwards, what is called agroindustry is observed, that is, the true exploitation of agriculture in business models (Paulo, 2021). Agribusiness has been recognized as a crucial driver of Brazilian economic growth (CNA, 2020). Agricultural production in Brazil has shown significant growth over the years. New technologies have been implemented in agriculture to supply the growing demand of the world consumer market (Oliveira, 2012; Pintor & Piacenti, 2021).

In the last 40 years, Brazilian agricultural production has developed so that Brazil will be the great food supplier of the future. This transforming effect of the agricultural revolution is undoubtedly the most crucial fact in Brazil's recent economic history and continues to open perspectives for the development future of the country.

Producing more and more, Brazilian agribusiness has drastically reduced the food price, improving the urban population's health and quality of life, freeing up their purchasing power for goods produced by industry and the service sector. Agricultural production increases significant surpluses. There was an expansion of its sales to the world, conquering new markets, generating exchange surpluses that freed the Brazilian economy. Despite contemporary challenges in domestic and international markets, exported products, destinations, and the diversity of Brazilian agribusiness have increased significantly (CNA, 2020).

As for international trade, 43% of Brazilian exports in 2019 were of agribusiness products. There is also a substantial contribution of agribusiness to the performance of the Brazilian economy. Figure 1 shows that since 2008, the Brazilian agribusiness trade surplus has more than the trade deficit of the other sectors of the Brazilian economy was overcome, and successive surpluses were guaranteed to the Brazilian Trade Balance.

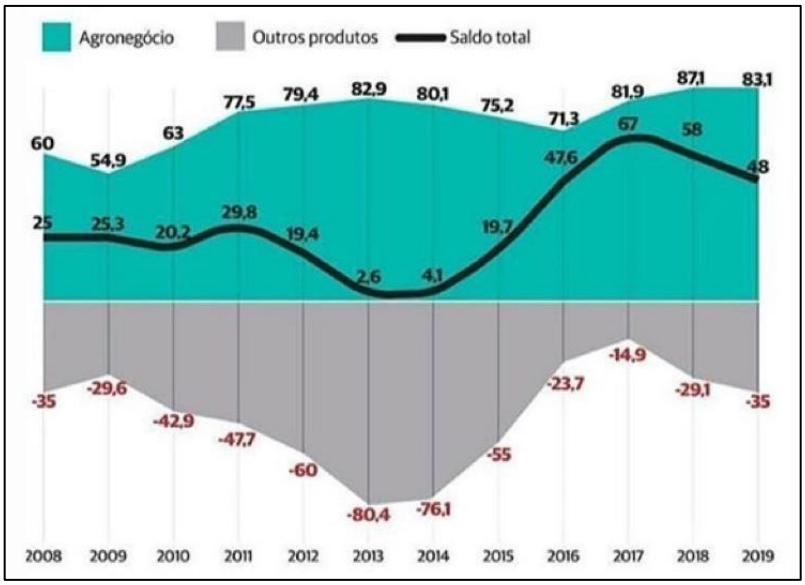

Figure 1: Brazilian Trade Balance Balance from 2008 to 2019 (in US$ billion)
Source: AgroStat /MAPA/CNA (2020).

Borges et al. (2013) explain that from the 1960s onwards, the current development model and social and environmental impacts began to be questioned. Until the first half of the 20th century, companies emerged and expanded without significant concerns about the environmental and social impacts generated. Progress was seen because of economic growth and development.

The Industrial Revolution, which emerged in the mid-eighteenth century, is considered the starting point of environmental problems, from the mechanization of the textile industry in Great Britain, which triggered not only economic and technological development at the time, reflecting throughout the production process throughout the world, but also at the origin of the production of solid waste and tailings, arising from these processes of creating machines and equipment, which ended up contributing to the intensive use of natural resources to meet the production and consumption demand of the time (Foster, Roberto & Igari, 2018).

The incessant search for economic results left gaps in the resolution of both environmental and social problems, mostly caused by the improper exploitation of natural resources (EMF, 2013). A growing global concern has occurred in recent years in relation to the preservation of our planet's natural resources, related to the concept of sustainability, some new, others classic, but renewed, and sometimes overlapping (Sehnem et al., 2019).

2.2 Sustainable Development

According to Elkington (2012), this concept adds dimensions of an economic character and brings together physical, financial, human, intellectual, social, and natural capital, the latter two, over time, becoming economic capital. Sachs (1994) states that sustainable development seeks to integrate the social-economic-environmental tripod (*triple bottom line*), harmonizing financial profitability and economic growth with justice, social well-being, environmental conservation, and the rational use of natural resources. Based on world movements, the discussion about the need for change in organizations takes shape, themes such as environmental management and corporate social responsibility are increasingly occupying the agenda of administrators. Therefore, an attempt is made to transform traditional organizations into sustainable organizations (Lawrence et al., 2005; Barbiere & Simanton, 2007).

Souza Filho (2009) adds that the concept of sustainable development has intensified, and the implications caused by agriculture have been a matter of constant concern and

discussion. In this sense, when it comes to sustainable agribusiness, Giodarno (2005) presents employer agriculture as a cause of problems related to the environment. Therefore, sustainable techniques have been sought to reduce these problems. Corporate sustainability in recent years has become increasingly broader, based on the integration of social and environmental practices, intending to meet society's needs (Lapenda, 2017).

The sustainability issue in this century assumes a central role in the reflection on the dimensions of development and the alternatives presented. The use of environmental practices by organizations is a global trend, as they increasingly realize the strategic importance of the theme (Veiga, 2010).

Currently, the Sustainable Development Goals or SDG, contained in the UN 2030 Agenda, to which 193 member countries are signatories, are a global call to action to end poverty, protect the environment and the climate, and ensure that people, in all places, may enjoy peace and prosperity. These are the goals to which the United Nations contributes to achieving the 2030 Agenda in Brazil (ONU, 2015).

2.3 Sustainable Entrepreneurship

Usually, entrepreneurship was associated with economic development and capital generation (e.g., Schumpeter, 1942; Kirzner, 1973), while environmental and social problems were overlooked. Bansal (2005) states that economic development must be aligned with the awareness of the limits of society and the environment, as well as the analysis of the impacts caused using natural resources. *Sustainable entrepreneurship* is an integrated vision that has been emerging in the last decade in academic literature and is a combination of economic, social, and environmental value creation (Cohen & Winn, 2007, Dean & Mcmullen, 2007, Schaltegger & Wagner, 2008, Binder & Belz, 2015).

Sustainable entrepreneurship for Hockerts & Wustenhagen (2010) is attracting the attention of governments, entrepreneurs and researchers, considering the discovery, development, and exploitation of opportunities linked to social and environmental niches that generate economic gain and social or environmental improvement (Shepherd & Patzelt, 2011).

As Haldar (2019) states, as part of social and environmental issues, the growing concerns d stake the need to develop fewer activities harmful to the environment and society, to account for a normative demand for the performance of organizations, regardless of industry performance or size (Aghelie et al., 2016).

The agribusiness industry has been considered one of the sectors causing significant problems of marking the local landscape and causes negative consequences to the population (De Souza Ramos et al., 2015; Cepea, 2019). Initiatives are pursuing a more sustainable agribusiness that is needed to minimize such issues. Sustainability is presented as problematic relevant, especially when considering the need to minimize impacts related to erosion and pollution of soil, water, and food (Da Silva, 2012).

Paz & Kipper (2016) point out the benefits directly related to the economic dimension of sustainability. It is possible to verify that the social dimension is included when citing the best relationship with government agencies, environmental groups, and a generation of harmony with society and better relationships in the work environment. The environmental dimension reflects on the economic one in terms of reduced consumption of water, energy and raw materials, better adaptation to environmental standards and prevention and reduction of fines and ecosystem penalties.

Young and Tilley (2006) claim that sustainable entrepreneurship is based on an integrated model with different dimensions included in entrepreneurship. This model proposed that organizations cannot think of sustainability in isolation. The integration between the

dimensions must be connected one to the other for organizational strengthening, according to Figure 2.

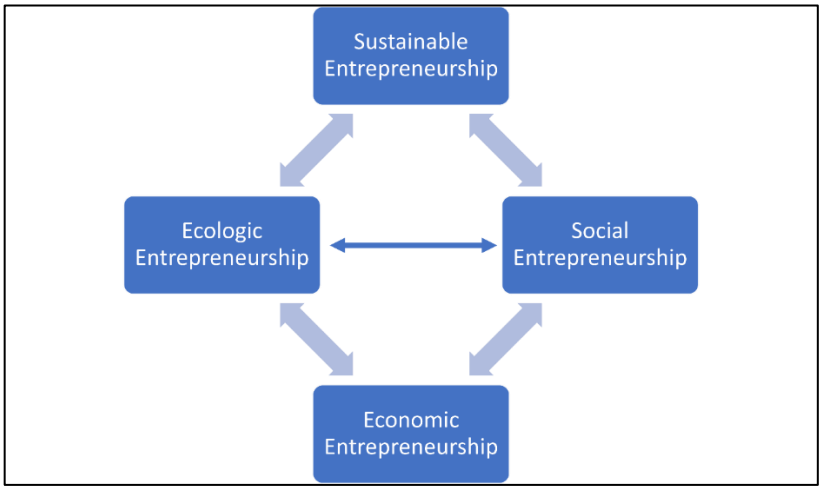

Figure 2: Sustainable entrepreneurship based on the integrated model.
Source: Adapted from Young and Tilley (2006).

Fussler (1996, p. 9) states that most companies today do not actively pursue sustainable entrepreneurship as a strategy to create market share; however, the author does not believe that this "innovation lethargy" will continue in the coming years. According to Morgan (1996), the relationship between sustainable development and entrepreneurship courses is always linked. It is attributed to the fact that organizations present themselves as an indispensable instrument for the entrepreneur to create something relevant. On the other hand, both form primary vital elements of society.

3 METHODOLOGICAL PROCEDURES

According to Malhotra (2012), the method must be coherent with the proposed research objectives. Given the objectives of this theoretical study, a qualitative research approach that emerges to develop models, typologies, and theories to describe or explain social issues (Gibbs, 2009) was carried out. Also, descriptive research highlights the characteristics of a specific population or phenomenon of certain groups (Gil, 1991). , in the form of a case study (Yin, 2010), and this is an "empirical investigation that investigates a contemporary phenomenon in-depth and in its context of real life, especially when the boundaries between the phenomenon and the context are not evident" (Yin, 2010, p. 39).

This study was carried out in an agro-industrial cooperative in the north of Rio Grande do Sul – RS (a state in the south of Brazil that is very well known for its significant participation in the national agribusiness production). The cooperative will have its name preserved and named in this study as Cooperative X. Primary data collection was carried out through semi-structured interviews in July of 2020 with the Environmental Coordinator of the Cooperative. The interview is one of the main methods of preliminary information. It is a technique that reflects the conscious and unconscious of the respondent (Malhotra, 2012). Secondary data with observation, analysis of documents by consulting the cooperative's website, documents, and internal controls.

A kind of source triangulation was used, whereby the findings of the case study are supported by more than one source of evidence (interviews, field observation and documents), allowing the convergence of evidence to occur and reinforcing the validity of the construct. For Gibbs (2009) it is about the analysis of different data, resulting from interviews, observations and documents.

The instrument for data collection was validated by a specialist in the field of environmental management and agribusiness. The validation and reliability of data collection occurred through the triangulation of information obtained from interviews, observation, and comparison with documents and controls of the cooperative.

For data analysis, the concepts of Bardin (2009) were used, using content analysis, which has as its primary function to unveil critical, allowing a better understanding of events.

4 RESULTS AND DISCUSSIONS

With commodities on the rise, investments in agribusiness act as a lever in generating employment and income throughout the country. It is due to the favorable conditions and the existing agrarian structure, together with the experience of organizing rural producers and official stimuli for the modernization of agriculture, that "Cooperative X" was created in 1957, covering 18 municipalities in the region and located in the north of Rio Grande do Sul (Brazil). It has 39 production units receiving, has over 7,000 members and has over 1.4 00 employees. Its turnover in 201 9 was more than R$ 2.353 billion. It operates in the field of sale of correctives, fertilizers, and agrochemicals, through its 13 agricultural and livestock input stores distributed in its coverage area.

Regarding Brazilian agribusiness, it is important to highlight that the culture of cooperation has been observed since the time of Portuguese colonization. This process emerged in the Brazilian Cooperative Movement at the end of the 19th century, stimulated by civil servants, military, liberal professionals, and workers, to meet their needs. From 1906 onwards, cooperatives were born and developed in rural areas, idealized by agricultural producers. In the South of Brazil, many of the producers were European immigrants, specially, from Germany and Italy. These immigrants brought from their countries of origin their cultural baggage, associative work, and the experience of community family activities, which motivated them to organize themselves into cooperatives. Brazilian cooperativism entered the 21st century facing the challenge of communication. Active and structured, its objective is to be increasingly known and understood as an integrated and strong system, capable of promoting sustainable economic development.

Cooperative 'X' aims at development through its policies, assuming a role of social and environmental responsibility through the activities developed through its Environment Department. In addition to generating value to members in an innovative, safe and sustainable way, Cooperative 'X' maintains permanent actions aimed at the development of the communities where it operates. It works, for example, strongly in environmental education and works in the search for eco-efficiency and clean technologies for the countryside.

As an environmental policy, the Cooperative aims to minimize environmental impacts in the development of products and services and promote environmental education actions. The activities are organized on an environmental agenda and are based on four objectives: 1 - Legal compliance (compliance with current environmental legislation); 2 - Eco-efficiency and clean technologies; 3 - Environmental Awareness; and 4 - Continuous Improvement.

In line with Hockerts & Wustenhagen (2010), "Cooperative X", in recognition of the work of environmental awareness and preservation and for complying with current environmental legislation, was awarded the Certificate of Environmental Distinction , for the Coordinator of the Environment the certification proves the cooperative's commitment to sustainable development and good environmental practices: "It is proof that we are on the right path, assuming a role of social responsibility and environmental, aiming to minimize environmental impacts and promote environmental education actions".

From the content analysis of the interviews and articulation with documents and observations collected in the field, it was possible to identify a series of good environmental

practices of Cooperative X. Two main groups, for the purposes of analysis, were identified: Educational Practices and Environmental Practices.

The findings demonstrate the surrounding community benefits from sustainable practices carried out by Cooperative "X", so it is fair to say that acting locally is crucial to transforming people's lives and promoting more humane and sustainable communities.

Regarding Educational Practices we highlight Activities in the Cooperative X itself and their project “School in the Countryside”, that is present in 14 different local municipalities. It has already benefited more than 20 thousand students from public schools, in the 5th and 6th grades. The project’s goal is to make students aware of the need to preserve natural resources, promote safety in the use of pesticides and encourage the production of healthy foods.

As an example of environmental practices, the cooperative has the Pesticide Empty Packaging Receipt Program, that Cooperative guarantees the correct disposal of pesticide packs and recycling of containers. Also, as environmental practices they have selective garbage collection, committed to the the Brazilian National Solid Waste Policy.

The empty packaging receiving unit is a place to receive the packaging of these products, designed to meet the requirements of the law. These units are intended to submit the packaging to a process that facilitates its transportation to the proper destination. Understanding the legislation is essential for the implementation of these units, as well as the environmental licensing granted by the state environmental agency.

At “Cooperative X”, the Environment sector has existed for almost twenty years and carries out educational and preservation environmental projects throughout the year, in addition to actions aimed at legal compliance. Haldar (2019), highlights the need to develop activities that are less harmful to the environment and society.

Within the social dimension of sustainability, with an emphasis on diversity and continuous improvement, the Women's Meeting of Cooperative X stands out as an important event that reflects the cooperative's broadly participatory nature. In it, the women of the members' families are encouraged to reflect on their condition with the family and at the head of the business, through the exchange of experiences in the most diverse subjects, ranging from motivation and self-esteem to the definition of strategies for greater inclusion in the social and organizational dynamics. The Cooperative also encourages female participation in meetings, courses, study trips and other activities, aiming to form a cohesive membership, where women exercise their leadership at all levels of the organization.

Also in the social dimension, the Cooperative holds the so-called “Child Leader Project”, carried out since 2007. This project aims to bring the children of cooperative members under 15 years of age to discuss issues and educational practices of integration and strengthening of the cooperative idea. This practice meets the objective of ensuring inclusive, equitable and quality education, and promoting lifelong learning opportunities for all. It is a way of making young people aware of the community's modes of production from an early age, promoting integration and an interest in the development of skills and techniques relevant to their surroundings.

Each of the identified practices in the Cooperative can be related to the SDGs. For instance, the sustainable agricultural production chain helps to halve the per capita food waste worldwide. Also, in a local level, sustainable practices can help regarding ending hunger, achieving food security, and improving nutrition, and promoting sustainable agriculture. An example of this is the “School in the Countryside Project”, empirically verified in this research. The table below highlights some of Cooperative X practices and list related SDGs:

Related SDG	**Environmental practices developed in “Cooperative X”**
SDG 1, 2, 4, 10.	✓ Activities in the “Cooperative X”; within the 84 hectares of the park, an area of 11 hectares is intended for carrying out actions related to environmental education.

	The Cooperative has been in existence since 2002 and every year it works on different themes for the discussion of the fair's visiting public, through workshops, theater, exhibitions, among other activities.
SDG 2, 4, 12.	✓ "School in the Countryside Project"; Present in 14 municipalities in the region it covers, the "School in the Countryside Project" has already benefited more than 20 thousand students from public schools, in the 5th and 6th grades. The objective is to make students aware of the need to preserve natural resources, promote safety in the use of pesticides and encourage the production of healthy foods.
SDG 6, 12, 13.	✓ Considering the enormous social and environmental damage caused by pesticide packages thrown into the environment and its contamination power, that is higher than the pesticide used in crops, they have the Pesticide Empty Packaging Receipt Program. Through a consolidated partnership with "Cinbalagens – Aria" (Packaging Receiving Center Devoid of Pesticides), the Cooperative guarantees the correct destination and recycling of containers. In 2017 alone, the association processed more than 1,030 tons of packaging, the cooperative delivered, in the same period, a total of 364,324 units. Thus, in addition to promoting the circular economy, Cooperative "X" prevents pesticide residues from reaching rivers and seas, harming the surrounding fauna and flora.
SDG 2, 3, 8, 12, 16, 17.	✓ Selective garbage collection within the cooperative and disposal of toxic waste. The correct disposal of solid waste, in addition to complying with the Brazilian National Solid Waste Policy, established by law, promotes employment and income for recyclers and benefits nature.
SDG 5, 17.	✓ The Women's Meeting of Cooperative X is on the side of achieving the goal of gender equality and empower all women and girls, ensuring effective participation and equal opportunities.
SDG 4	✓ Child Leader Project: ensuring inclusive, equitable and quality education for community members.

Table 1 - Environmental Practices Developed by Cooperative "X"
Source: Research data (2020)

Corporate sustainability in recent years has become increasingly broader, based on the integration of social and environmental practices, with a view to meeting the needs of society (Lapenda, 2017; Veiga, 2010). "Cooperative X" works together to increase productivity and profitability and to keep people in the countryside and in this way promotes the development of the entire region where it operates, not just of people alone, according to the cooperative manager, "this growth occurs both economically and in improving the quality of life."

> "All over the world, cooperativism has an enormous responsibility both with the economy and with the social issue. Where there is a cooperative, the human development index is higher. And this is even more evident in times of crisis, because in these times of difficulties cooperativism stands out, providing security to its members, contributing to more sustainable societies".

Sustainable entrepreneurship is an integrated vision that has been emerging lately (Cohen & Winn, 2007, Dean & Mcmullen, 2007 , Schaltegger & Wagner, 2008; Hockerts & Wustenhagen, 2010), showing the importance of the cooperative and how it needs to develop competitive strategies that have sustainable entrepreneurship in their scope, seeking to dialogue with the dimensions of sustainable entrepreneurial activities with products/services, vision, mission and values , sustainable entrepreneurship is actively present in cooperativism, and a cooperative can increase the business opportunity, get better results, risk reduction and economy of scale benefits.

Fussler (1996) says that organizations do not have search of actively sustainable entrepreneurship as a share of market strategy, and in counterpoint Cooperative X says

> "It only achieved solidity and became a cooperative that everyone is proud of because the membership is very united, in these 60 years of history, we continue to work together to achieve the best results for the producer and for everyone who is somehow part of our return".

The findings demonstrate that the surrounding community benefits from sustainable practices carried out by Cooperative "X", so it is fair to say that acting locally is crucial to transforming people's lives and promoting more humane and sustainable communities. Due compliance with environmental legislation by the Cooperative X also produces opportunities, from valuing the company identified with the protection of the environment, to raising funds that finance maintenance projects and adequate exploration of the environment. The goal 16.5 of SDG 16 aims to substantially reduce corruption and bribery. Practices of compliance with environmental standards, in addition to directly assisting in the health and well-being of the surroundings, reinforce anti-corruption behavior, benefiting society as a whole and creating a culture of compliance for future generations. Figure 3, bellow, illustrates the main axes of action of the cooperative in terms of sustainable development and the objectives most in line with the studied projects.

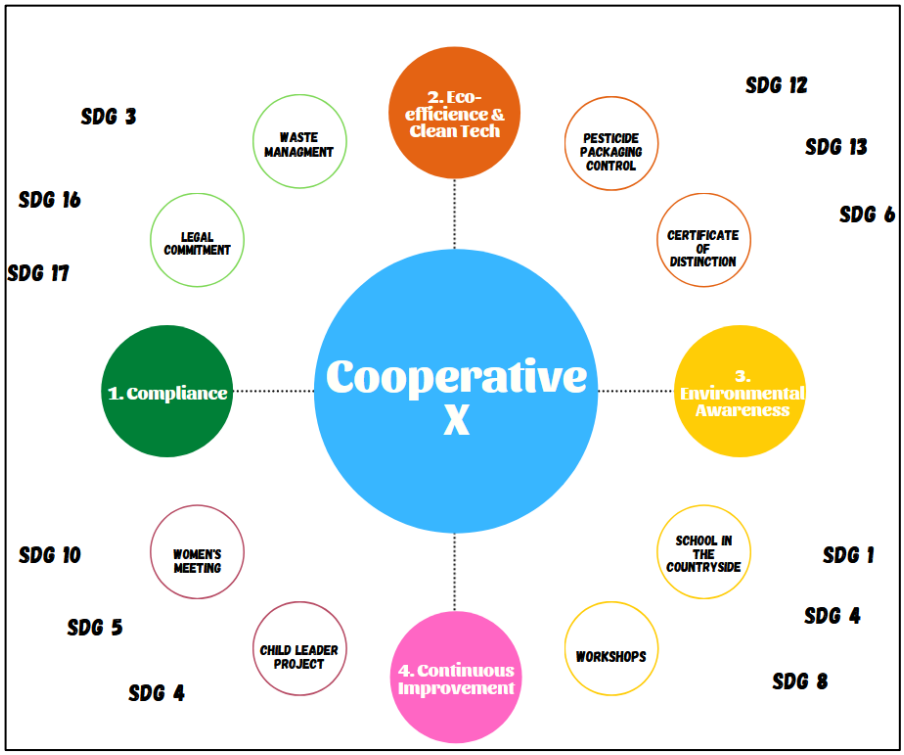

Figure 3 - Cooperative "X" & related SDGs
Source: The Authors (2020).

Through cooperation and aggregate processes, the management of social issues increases the bond between organizations and society, even if conflicts among stakeholder's concerns may occur.

5 CONCLUSIONS

The transformative effect of the agricultural revolution of the last 40 years is undoubtedly a crucial fact in Brazil's recent economic history. It continues to open perspectives for the country's future development. Producing increasingly more significant surpluses, agribusiness expanded its sales worldwide, conquered new markets, and generated exchange surpluses that freed the Brazilian economy. Agribusiness has been recognized as a crucial driver of Brazilian economic growth.

This study sought to investigate environmental sustainability practices in an agro-industrial cooperative and analyze how sustainable entrepreneurship is transforming the lives

of families and the space where they live. The sustainability of an organization is not just a marketing factor. Sustainable agribusiness presents itself as an alternative to traditional agriculture aiming to solve problems related to the environment, aiming to search for sustainable techniques to reduce these problems. As a result, this study clarifies the constant pursuit of Cooperative X for sustainable development and practices related to SDGs. In addition to generating sustainable value to the cooperative, the cooperative has ongoing actions of development of the communities where it operates, with practical action on environmental education and in the search for eco-efficiency in the field.

There are several particularities in the sustainable entrepreneurship process for future research that need to be explored in further studies. They need to go beyond financial concerns, as there is little research on sustainable entrepreneurship that investigates and explores social and environmental businesses in an integrated way. Future research can also investigate the context of other cooperatives for future comparisons. Relevant questions such as these can only be answered with varied interdisciplinary and theoretical lenses. We also recommend deepening how rural cooperatives can contribute to sustainable development and their relationship with achieving the SDGs.

REFERENCES

Aghelie, A., Sorooshian, S., &Azizan, N. (2016). A. Research gap in sustainable Entrepreneurship. *Indian Journal of Science and Technology*, vol. 9, n. 12, p. 1-6.

Alves, A. O., & Leal, A. C. (2003). *Pressupostos teóricos e metodológicos do planejamento ambiental*. Formação (Online), *1*(10).

Bansal, P. (2005). Evolving sustainability: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, v. 26, n. 3, p. 197-218, 2005.

Barbiere, Jc; Simanton, Ma. *Organizações Sustentáveis Inovadoras.* São Paulo: Atlas, 2007.

Barbieri, Jc *Corporate social responsibility and sustainable company*: from theory to practice. 3rd ed. São Paulo: Saraiva, 2016.

Bardin, L. (2009). *Análise de Conteúdo*. Lisbon: Editions 70.

Binder, Julia Katharina; Belz, Frank-Martin. (2015). *Sustainable entrepreneurship*: what it is. Handbook of Entrepreneurship and Sustainable Development Research, p. 30-72, 30 jan 2015. Edward Elgar Publishing. http://dx.doi.org/10.4337/9781849808248.00010.

Borges, C.; Borges, MM; Ferreira, VRS; Najberg, E.; Tete, MF (2013). *Sustainable Entrepreneurship*: Proposition of a Typology and suggestions d and Research. Magazine of Entrepreneurship and Management of Small Businesses, vol. 2, n.1, p. 77-100.

Brazil. Ministry of Agriculture and Environment. Brazilian agriculture in numbers 2020. Available at: https://www.gov.br/agricultura/pt-br/assuntos/politica-agricola/todas-publicacoes-de-politica-agricola/agropecuaria-brasileira-em-numeros/agropecuaria-brasileira-em-numeros -October-2019. Accessed on: Jul 2020.

Brazil. Ministry of Agriculture, *Livestock and Supply*. Agribusiness Projections Brazil 2016/17 to 2026/27 Long Term Projections. Available at: https://www.gov.br/agricultura/pt-br/assuntos/politica-agricola/todos-publicacoes-de-politica-agricola/projecoes-do-agronegocio/projecoes-do-agronegocio-2017-a-2027-preliminary-version-25-07-17.pdf. Accessed on: Jul 2020.

Buainain, A. (2006). *Agricultura familiar, agroecologia e desenvolvimento sustentável*: questões para debate. IICA, Costa Rica.

CNA. Confederação da Agricultura e Pecuária do Brasil. *Panorama do Agro.* Disponível em: < https://www.cnabrasil.org.br/cna/panorama-do-agro#_ftn1>. Accessed on: Jul 2020.

Cohen, B; Winn, M. I. (2007). Imperfeições de mercado, oportunidade e empreendedorismo sustentável. *Journal of Business Venturing*, v. 22, n. 1, pág. 29-49.
Da Silva, D. B. Sustainability in Agribusiness: economic, social and environmental dimensions. *Communication & Market*, v. 1, no. 3, p. 23, 2012.
de Pintor, E., & Piacenti, C. A. (2021). Política agrícola no Brasil e na Alemanha. *Revista Campo-Território*, *16*(40 abr.), 66-90.
De Souza Ramos, J. R. N.; Santos da Silva, M.; De Almeida Neto, P. P. (2015). Limitações na responsabilidade socioambiental no agronegócio do oeste baiano. *Revista de Gestão Ambiental e Sustentabilidade – RGSA*, v. 4, n. 1, p. 30-45.
Dean, T.; Mcmullen, J. (2007). Toward a theory of sustainable entrepreneurship: reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, vol. 22, no. 1, p. 50-76, 2007.
Elkington, J. (2012). *Sustainability, cannibals with knife and fork*. São Paulo: M. Books of Brazil.
EMF, (2013). Ellen MacArthur Foundation (EMF). *Towards the Circular Economy*, vol.
1 (2013). (Isle of Wight).
Foster, A., Roberto, S. S., & Igari, A. T. (2016). *Economia circular e resíduos sólidos*: uma revisão sistemática sobre a eficiência ambiental e econômica. Encontro Internacional Sobre Gestão Empresarial E Meio Ambiente, São Paulo.
Gibbs, G. (2009). *Análise de Dados Qualitativos*. Porto Alegre: Bookman.
Gil, AC (2007). *Metodologias e Técnicas da Pesquisa Social*. 5. ed. São Paulo: Atlas.
Haldar, S. (2019). Green entrepreneurship in the renewable energy sector–a case study of Gujarat. *Journal of Science and Technology Policy Management*.
Hockerts, K.; Wüstenhagen, R. (2010). *Greening Goliaths versus Emerging Davids*: Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. Journal of Business Venturing, vol. 25, p. 481-492.
IBGE. (2020). *Digital national atlas of Brazil*. [Rio de Janeiro, 2017]. Available at: <https://www.ibge.gov.br/apps/atlas_nacional/>. Accessed on: Jul 2020.
Kuckertz, A.; Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions: investigating the role of business experience. *Journal of Business Venturing*, vol. 25, p. 524-539.
Lawrence, A.; Weber, J. (2005). Post, J. *Business and Society*. New York: McGrawHill.
Malhotra, N. (2012). *Pesquisa de Marketing*: Uma Orientação aplicada. Porto Alegre: Bookman.
Marconi M; Lakatos, E; (1995). *Metodologia Pesquisa Científica.* São Paulo: Atlas
Morgan, G. (1996). *Imagens da Organização*. São Paulo: Atlas.
Oliveira, Eds *The importance of the final destination of empty pesticide containers*. Uniabeu Magazine, v. 5, no. 11, p. 123-135, 2012.
Paulo, T. B. D. (2021). *A sustentabilidade no agronegócio a partir de uma análise jurídica*. Dissertação (Mestrado) - Universidade Nove de Julho - UNINOVE, São Paulo, 2021
Paz, F. J.; Kipper, L. M. Sustentabilidade nas organizações: vantagens e desafios. *GEPROS: Gestão da Produção, Operações e Sistemas*, Bauru, Ano 11, n. 2, p. 85-102, 2016.
Sachs, I. (1994). *Estratégias de transição para o século XXI*. *In*: Bursztyn, M. (Org.). Para pensar o desenvolvimento sustentável. São Paulo: Brasiliense, p. 29-56.
Schaltegger, S.; Wagner, M. (2008). *Types of sustainable entrepreneurship and conditions for sustainability innovation*: from the administration of a technical challenge to the management of an entrepreneurial opportunity. Sustainable Innovation and Entrepreneurship. Cheltenham: Edward Elgar, p. 27-48.
Schaper, M. (2002). *The essence of ecopreneurship*. Greener Management International, p. 26-30.

Schumpeter, J. (1934) *The theory of economic development*. Cambridge: Harvard University Press.
Sehnem, S. (2019). Circular business models: Babbling initial exploratory. *Environmental Quality Management*, 28(3), 83-96.
Shepherd, Da; Patzelt, H. (2011). *The New Field of Sustainable Entrepreneurship*: Studying Entrepreneurial Action Linking "What Is to Be Sustained" with "What Is to Be Developed." Entrepreneurship: Theory & Practice, vol. 35, no. 1, January, p. 137-163.
Souza Filho, Hm Desenvolvimento Sustentável Agrícola. (2009). *In*: Battle, MO (Coord.). *Gestão Agroindustrial*. v. 1 – 3. ed. – 3. reprint. – São Paulo: Atlas, p. 665-710.
Souza, G. M. F. (2020). Empreendedorismo Sustentável: Estudo de caso na Associação de Agricultores de Hortifrútis Orgânicos na cidade de Juazeiro Do Norte–CE. *Revista Inteligência Competitiva*, vol. 10, no. 1, p. 16-35.
United Nations Organization. *World urbanization prospects*: the 2014 revision: highlights. New York, 2014.
USDA – United States Department of Agriculture. *Production, supply and distribution*. From: <https://apps.fas.usda.gov/Psdonline/app/index.html#/app/home/statsByCountry>. Accessed on: Jul 2021.
Vergara, SC (2000). *Começando a definir a metodologia*. Projetos e Relatórios de Pesquisa em Administração, v. 3, p. 46-53.
Yin, R. K. (2005). *Case Study*: Planning and Methods. 3. ed. Porto Alegre: Bookman.
Young, W.; Tilley, F. (2006). *Can businesses move beyond efficiency*? The shift toward effectiveness and equity in the corporate sustainability debate. *Business Strategy and the Environment*, no. 15, v. 6, p. 402-415.
Zahra, S. et al. (2009). A typology of social entrepreneurs: motives, search processes and ethical challenges. *Journal of Business Venturing*, vol. 24, no. 6, p. 519-532.
Żak, A. (2015). *Triple bottom line concept in theory and practice*. Social Responsibility of Organizations Directions of Changes, 387, 251-264.