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Young people and family rural properties in the West region of Paraná

Os jovens e as propriedades rurais familiares na região Oeste do Paraná

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Abstract
In this article, we investigated how young people in the municipality of Assis Chateaubriand perceive the rural space and family rural property succession. The municipality of analysis has traditionally used land for agricultural production, and as a result, its economic development is influenced by it. A questionnaire was used to collect data from 153 young people from the municipality ranging in age from 14 to 29. To obtain the results, several steps were taken, including descriptive statistics, factor analysis, and content analysis. We found that young people do not see themselves as essential elements for the continuity of the family's rural property. In this sense, it is necessary to develop activities that encourage dialogues on the succession process in rural properties in the region, on the initiative of public or private agents.
Keywords: family succession, continuity of family ownership, rural development

Resumo
Investigou-se como os jovens do município de Assis Chateaubriand, percebem o espaço rural e a continuidade da propriedade rural familiar. O município da análise, tradicionalmente tem o uso da terra direcionado à produção agrícola, ou seja, tem seu desenvolvimento econômico influenciado por esta produção. Foi utilizado questionário para a coleta de informações, ao qual se obteve resposta de 153 jovens, entre 14 e 29 anos, residentes do município. Diferentes etapas foram realizadas para a obtenção dos resultados, como estatística descrita, análise fatorial e análise de conteúdo. Identificou-se que os jovens não se consideram elementos essenciais a continuidade da propriedade rural familiar. Por esta questão acredita-se ser necessário, por iniciativa de agentes públicos ou privados, o desenvolvimento de atividades que incentivem diálogos sobre o processo de sucessão em propriedades rurais na região.
Palavras-chave: sucessão familiar, continuidade da propriedade familiar, desenvolvimento rural

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1 Introduction

Brazil is globally known for its agricultural production. In 2018, it allocated over 73,000 hectares of land for agricultural production, such as soybeans and maize, and over 5,000 hectares for permanent crops, such as orange and latex (IBGE, 2018). Thus, the country contributes to global food supply by selling surplus agricultural products in domestic markets and exporting surplus agricultural products. Food availability is influenced by a number of factors, including agricultural technological innovations for tropical climates, the availability of natural resources (arable land), and increased yield (Maranhão & Vieira Filho, 2016).

Brazilian agricultural production takes place in various regions, but land use in some of them is primarily devoted to rural activities. For example, in 2018, the Midwest and South regions accounted for 65% of the total Brazilian agricultural land intended for production. Individually, they represented 37% and 28% of the total agricultural land, respectively (IBGE, 2018). The state of Paraná, which is located in the southern region of the country, has a diversified economy. Farm production, on the other hand, plays a significant role, accounting for more than 60% of the state's land use. In 2018, Paraná contributed to land use for agricultural production with approximately 50% of all productive areas in the southern region (IBGE, 2018). Thus, farm production has historically aided in the formation of municipalities in the state in the past and continues to contribute to their development to this day. One of the municipalities with this feature is Assis Chateaubriand, a city designed for agricultural production. After 51 years, it sets aside 92% of its land for agricultural production. In 2017, 97% of the rural properties in the municipality were identified as having family farming characteristics. The properties were owned and managed by one farmer or a couple of farmers (IBGE, 2017).

The dominance of agricultural land use influences income generation dynamics as well as cultural and social issues in the area. However, in line with the global trend of population aging, 56% of Assis Chateaubriand farmers are aged 55 or older. Out of this group, 12% are aged 75 or older (IBGE, 2017). Thus, the continuation of local rural property and activities is dependent on the inclusion of younger people in rural areas. Afterall, the most common mode of land access in the world is through generational family farming (Alston, 2009). The family farming tradition has been passed down from generation to generation as a way of understanding the world (Brandth & Overrein, 2013). As a result, the inheritance received in the rural family universe extends beyond the land production factor to include family production practices (Cheshire et al., 2013). That is, the property is regarded as a rural landmark. The history of a property is linked to the history of the family who owns it (Lobley & Baker, 2012). Therefore, by remaining a landowner, the individual preserves the family legacy (Curran-Cournane et al., 2016). From this perspective, farming can be considered a professional heritage (Potter & Lobley, 1996a).

However, it is believed that the needs of rural youth are similar to those of urban youth (Carneiro & Castro, 2007). This finding takes into consideration youth access to culture, leisure, technology, and other activities (Anjos et al., 2014). Even though the rural area is important for the local economy, it has long been thought to be inferior to the Brazilian urban space, and even undeveloped (Ramalho & Moreira, 2010, Grisa et al., 2013). That is, it is an unappealing place to live for the majority of the population, particularly the younger generation. Nevertheless, since the introduction of rural technologies in the late 1980s, the gap between rural and urban areas in Brazil has narrowed (Graziano da Silva, 2001; Schneider, 2010). Thus, services and infrastructure typical of urban spaces can be found in Brazil's rural areas, partially meeting the needs of young people (Grisa et al., 2013; Carneiro, 1998).

The purpose of this study is to determine how the youth in the municipality of Assis Chateaubriand perceives the rural space and the continuity of family rural property. The youth's perception of the rural space and the continuity of family rural property are related issues, as this space has long been associated with development setbacks in Brazil. Therefore, it is an unappealing location for people to settle. In this case, the individual seeking a higher social status should look for other opportunities in the urban sphere. This search for better living conditions is carried out through work or schooling, in order to enable this individual to pursue a profession other than that of their parents: a farmer or a rural worker; and that such a profession could be better recognized socially (Carneiro & Castro, 2007; Stropasolas, 2014).

It is important to note that the majority of rural landowners in Brazil's South (51%), Southeast (52%), and Midwest (51%) regions are aged 55 years or older, which indicates that farmers are aging (IBGE, 2017). Family properties predominate in all regions: the Midwest (64%), the Southeast (71%), the South (78%), the Northeast (79%), and the North (83%) (IBGE, 2017). Still, in areas where the rural population of landowners is aging, agricultural land use is represented by a significant percentage, such as the South (49%), Southeast (60%) and Midwest (43%) (Mapbiomas, 2018). Based on these characteristics, the majority of the country resembles the municipality under investigation.

When it is ascertained that rural landowners are aging (IBGE, 2017), it is only a matter of time before a decision on the continuation of the rural property is required. One of the issues identified by the International Monetary Fund (2017) is that studies related to this process are typically conducted in highly developed countries, which is different from the Brazilian reality. As people's behavior is related to their perception of reality, identifying how the youth perceives the rural space can be significant for this continuity process (Robbins, 2005). Thus, positive assessments are associated with favorable perceptions of a specific behavior, whereas negative assessments are associated with unfavorable perceptions (Ajzen, 1991). In this context, a positive perception of rural areas by the youth may imply that the process of continuity in rural properties is easier, while the opposite may imply difficulties with this continuity.

2. The continuity of rural property and the youth's perception of this space

According to Alston (2009), the most common access to land in the world occurs through generational family farming, which is characterized by property ownership and management carried out by the family. Family farming has been passed down from generation to generation as a way of understanding the world (Brandth & Overrein, 2013). Therefore, because housing and economic production activities are associated to it, the older generation has a strong attachment to their property (Downey et al., 2017). In the rural family universe, inheritance is a part of this scenario, in which the father/mother transfers to the child not only the land production factor, but also the family productive practices (Cheshire et al., 2013).

Thus, the property is regarded as a symbol of rural space. The history of the property is also linked to the history of the family that owns it through the management of the business passed down from generation to generation (Lobley & Baker, 2012). In this sense, the individual preserves the family legacy by remaining the land's owner. Being a rural producer, according to this understanding, can be considered a professional heritage (Potter & Lobley, 1996).

However, changes in demographic, social, environmental, and economic characteristics in rural areas may have an impact on the property's continuity. Especially given the new requirements that may influence how production processes are carried out. In this sense, the world is changing, which can have an impact on how agricultural production is carried out.

Climate change, water use control in agricultural production (Downey et al., 2013), global commercialization of rural production, competitiveness and requirements in health, environmental, and social issues, as well as animal welfare, are all examples of changes (Zagata & Sutherland, 2015). These elements require adjustments in the way the property is managed (Downey et al., 2017).

Furthermore, the aging of the rural population is a reality in various parts of the world (Duesberg et al., 2017). Because aging in rural areas implies a decrease in the availability of the individual's workforce, a successor to replace the property manager is required (Harris et al., 2012). Likewise, retiring represents a context of change for producers, who must organize their lives in light of this new circumstance (Sappey et al., 2012). In view of these observations, rural producers nearing retirement are challenged by a lack of heirs interested in remaining on the rural property, as well as the need for changes in the production process (Downey et al., 2017).

Thus, the aging of rural landowners, a lack of successors for the properties, and the restructuring of the agricultural sector are factors regarded as challenges related to the way land is used in terms of efficiency and sustainability (Giannakis & Bruggeman, 2015). These issues become even more pressing when one considers the growing global population and the need to increase food production (Duesberg et al., 2017).

Furthermore, migration from rural to urban spaces is a factor that must be viewed negatively in this context, given that migration is related to economic development and structural changes in society (Lucas, 2004). Thus, succession in rural properties is perceived as a complex issue, with economic and social factors influencing the decision to transfer the property to a successor (Leonard et al., 2017). This complexity is aggravated by the continuous and relatively lengthy process that results in the transfer of duties and asset management to the successor (Boyd et al., 2014). Thus, the succession process refers not only to the legal transfer of ownership of a production factor, but also to the transmission of knowledge accumulated over a family generation, as well as the new owner's connection to the land (Cheshire et al. ., 2013).

Furthermore, in addition to the effects on production, a lack of succession in rural properties can result in other disadvantages. The first refers to the loss of knowledge created and shared by generations of people who lived in the respective rural space. The second concerns the area's destination, which may or may not be related to rural activities (Carillo et al., 2013). Even if other owners (individuals or legal entities) acquire the land and increase their agricultural production scale, these gains cannot be said to compensate for the loss of specific human capital in each rural property (Bertoni & Cavicchioli, 2016). Furthermore, when succession does not occur, business usually reduces (Inwood & Sharp, 2012).

On properties where succession occurs, the process of slowing productivity is quickly reversed, and the acquisition of innovations occurs, as the tendency is for agricultural activity expansion and diversification (Harris et al., 2012). Hence, discussions about rural property succession are becoming increasingly relevant for the global agriculture's sustainability and development process, because younger farmers may be associated with a more efficient and effective production (Leonard et al., 2017). Nonetheless, the youth is the most likely to accept innovations that have a lower environmental impact (Howley et al., 2012). Still, transferring rural property to a younger successor is a difficult process (Leonard et al., 2017).

In this sense, it is believed that succession in any type of business should be planned in the long term to avoid frustrations with the outcome (Hor et al., 2010). In critical situations, the rural property manager cannot select a successor because the process is dependent on the interaction of the owner, the successor, and the property (Fischer & Burton, 2014). This

decision is influenced by a variety of factors, such as: i) preserving the business's viability for the successor, (ii) being fair to all heirs, and (iii) retiring with financial security (Barclay et al., 2011). Other characteristics to consider in this context include: (iv) producers' autonomy, with their workplace and housing interacting in the same space (Riley, 2016), and (v) being inextricably linked to their activities and the rural property. (Riley, 2016). Furthermore, (vi) the producer's identity and status in the community in which they live are defined by their work activities (Kuehne, 2013). As a result, producers find it difficult to retire and delegate management responsibilities to their successors.

Another issue raised in relation to the continuity of ownership is that managers are now more easily able to transfer property management in locations where there are successors within the family. If these successors are not family members, the succession process becomes more complex (Riley, 2016). Succession planning is thus essential for a smooth transition. This planning will provide the successor with experience in the activities delegated to the business manager (Hor et al., 2010). To accomplish this, the manager must share and then transfer their activities pertaining to the rural property to the successor (Conway et al., 2016).

It should be noted that the succession does not have to be carried out by a single person. When there are multiple potential successors, the possibility of shared leadership exists, and the family business benefits from the existence of mutual trust between the managers (Carter III; & Kidwell, 2014). Four recurring factors in academic production were identified as potential influences for the occurrence of succession in rural property: i) the size of the rural property, (ii) the age of the farmer, (iii) the economic results of agricultural production, and (iv) production diversification (Barclay et al., 2011). On the other hand, when the heir has a higher formal education, the chances of succession are reduced (Hennessy & Rehman, 2007). This reality, however, may change as intelligent agriculture is introduced into the rural context. To manage the property in this case, the producer will have to be technologically trained (Wolfert et al., 2017).

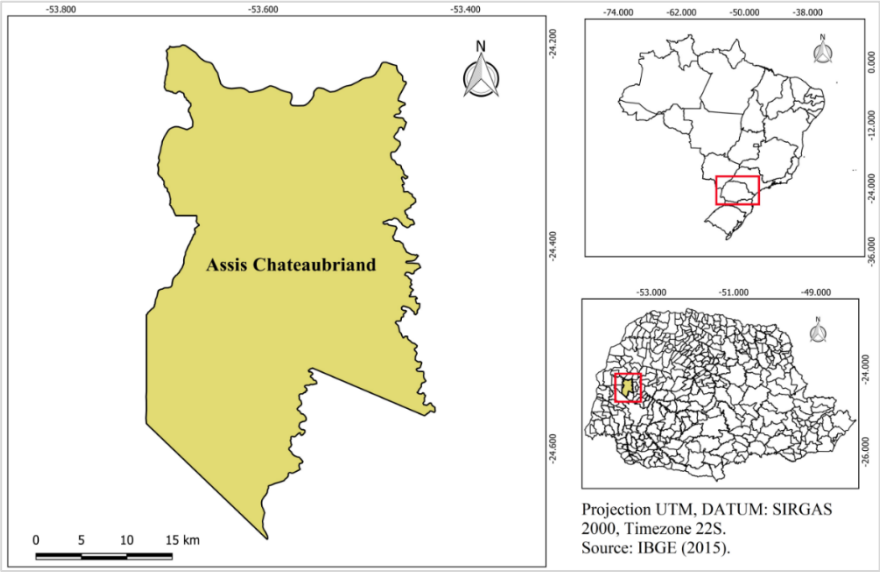
Thus, for the succession to occur, young people must be interested in remaining in the rural area and developing work activities related to the properties. It should be noted that two components have been identified that favor this permanence: i) the connection that young people develop throughout their lives with the activities developed on the properties, and (ii) the government incentives arising from public policies aimed at people staying on rural properties (Bednakov et al., 2016). However, there are some cases where there are no heirs to take over property management. Problems frequently arise in this situation as a result of trends in innovation and the reduction of environmental impacts associated with rural production. Due to the lack of family continuity of the rural property, rural producers without successors are often resistant to implementing innovations that can increase productivity and the environmental sustainability of production (Duesberg et al., 2017).

3. Materials and Method

3.1 Location

The young research participants live in Assis Chateaubriand's urban and rural areas (Figure 1). Agriculture has been the municipality's main economic activity since colonization. The main municipal district's urban project is linked to agricultural and real estate negotiations. The establishment of the municipality was connected to the expansion of western Paraná's agricultural frontier in the 1950s, which aimed to meet the food demands of the country's southeast (Swain, 1988). Brazil's southeast region has the highest population concentration.

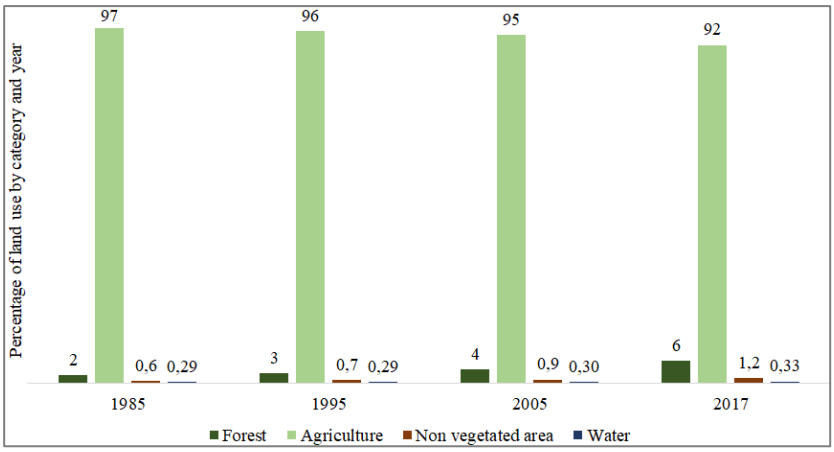
Figure 1: Location of the Municipality of Assis Chateaubriand - Paraná, Brazil



Source: Plotted using IBGE (2015).

It was possible to identify the land use in the municipality from 1985 to 2017 (Figure 2), and also the percentage of individuals who participate in the land use in categories i-Forest, ii-Farming, iii-Unvegetated area, and iv-Body of Water. Agricultural land use occupied the greatest number of hectares of land available in the municipality overall years of analysis.

Figure 2: Percentage of land use in the municipality of Assis Chateaubriand, in percentage - 1985 to 2017



Source: Plotted using MapBiomas (2018).

The municipality's land structure has changed with each Agricultural Census conducted between 1970 and 2017. Given the 82% decrease in land ownership between 1970 and 2017, these changes imply a process of land concentration over time (Table 1). Another aspect to note is that, with the exception of the group using less than one hectare, all groups, including those under 50 hectares, had a negative variation, i.e., a decrease in the number of properties between 1970 and 2017. Groups using more than 50 hectares, on the other hand, have grown in percentage variation. Because there were no records of properties with this extension of land in 1970, the groups between 500 and less than 1,000 and 1,000 to less than 2,500 hectares were

not analyzed in terms of percentage variation. However, the number of properties with these characteristics increased significantly in the following years (IBGE 2017).

Table 1: Assis Chateaubriand Land Structure - 1970 to 2017

Area Group – Hectares*	1970**	1985**	1995/96**	2006**	2017**	Variation 1970-2017 (%)
Less than 1	7	56	52	28	75	971
1 to less than 2	145	67	76	41	24	-83
2 to less than 5	2,702	748	618	443	158	-94
5 to less than 10	2,617	848	651	508	180	-93
10 to less than 20	2,071	1,234	894	713	297	-86
20 to less than 50	733	809	765	660	370	-50
50 to less than 100	59	202	240	264	178	202
100 to less than 200	14	81	97	98	99	607
200 to less than 500	15	31	45	29	69	360
500 to less than 1,000	0	4	4	10	16	-
1,000 to less than 2,500	0	1	1	2	3	-
Total properties	8,363	4,081	3,443	2,796	1,469	-82

*** Area group -** name used by IBGE to classify the of rural properties
**** Number of properties**

Source: Created based on IBGE data (1970, 1985, 1996, 2006, 2017).

3.2 Characterization of the research

In this research, a questionnaire was applied to young people, from August 2018 to April 2019. This study's population of interest is young people aged between 15 and 29. For data collection, we conducted an anonymous online survey, which was applied at respondents' place of study. Participants accessed the questionnaire on their cell phones. To create this sample, it was necessary to contact people in charge of rural primary schools located in city districts, as well as the Federal Institute, to identify individuals who would respond to the questionnaire. Altogether a total of 153 questionnaires were applied.

The study developed by Rye (2006), which identified young people's perceptions of rural areas, served as a guide. Rye (2006) conducted a research with young residents of the Norwegian countryside to estimate their perceptions of the location using 15 keywords. In this study, we used 15 keywords from the literature that were extracted from Buainain et al. (2014), Neto and Nazareth (2013), Abramovay (2000), and Camarano and Abramovay (1999).

The youth participants were asked to categorize the words tranquility, community, security, masculinization - more men than women in rural areas - health, honesty, cooperation, solidarity, respect, faith, agricultural innovation, soil care, environmental preservation, production diversification, and succession in rural property. To classify the words, the youngsters should decide whether or not the word represented the rural environment. An anchored scale of 1 to 5 was used for this, with 1 indicating "little represents" and 5 indicating "very well represents." This study used the same characteristics proposed by Rye (2006), such as the same number of words as the author and the use of Factor Analysis. However, this stage of the study allowed for the identification of the perception of the local rural, and what was proposed goes beyond that, as it also considers the continuity of rural family property.

Thus, other information was verified with the participants about how they expect agricultural production in the region to continue. This is prevalent in the municipality under

consideration. An open question was used for this: "How do you expect agricultural production to be carried out in the region in the near future?" The Content Analysis was used to allow participants to freely express themselves, with the purpose of determining which elements, based on their experiences, were important for production continuity. The responses to the open question were read twice and categorized as they related to rural production. The categories were identified based on characteristics found in the literature on rural production.

For Caregnato and Mutti (2006), content analysis is a research technique that identifies the text as a form of individual expression. For its accomplishment, the following steps were followed: i) pre-analysis, with organization and reading of the collected material; ii) exploration of the material, with the establishment of analysis categories according to the reference and sequencing of categories; and iii) interpretation, with identification of the contents present in the analysis material, with the support of the framework (Bardin, 1977; Silva& Fossá, 2013).

According to this methodological sequence, the following actions were carried out at each stage: i) all the young people's responses were gathered in a table and this material was read; ii) From the reading of the collected content, common elements were identified in the answers attributed to the guiding question. As the material was read twice the elements were identified and confirmed. These elements were grouped into categories. Finally, iii) the categories were related to the literature referring to food production, being assigned a name, according to its characteristics. From the identification of the category, the quantification of the number of times that the elements appeared in the answers of the young people was carried out.

Furthermore, their perspectives on the impact of the variables i-heir succession, ii-profit from farm production commercialization, iii-new rural technologies, iv-increased female participation in property management, and v-access to services in rural areas (such as running water, electricity, internet, and so on) on the continuity of family rural property were evaluated. The variables were extracted from Buainain et al. (2014) and the UN (2017).

For this purpose, the questionnaire “Regarding your perceptions about rural properties in the region, what is your degree of agreement for each of the sentences below” was created. An anchored scale from 1 to 5 was applied, with 1 referring to ‘strongly disagree’ and 5 ‘strongly agree’:

- The children of rural landowners must continue the rural property work.
- New rural technologies (mechanization, drones, GPS, among others) contribute to the continuity of rural property.
- Access to internet, mobile phone, computer, running water, asphalt and electricity in rural areas are facilitators for people to stay in the rural property.
- The increased participation of women in the management of rural properties contributes to the continuity of rural property.
- The profit generated by the commercialization of agricultural products influences the continuity of the rural property.

3.4 Statistical analysis

The analysis was carried out in three stages. Initially, descriptive analyses were performed in order to characterize the participants, that is, to understand some of the characteristics of those who took part in the research. The set of 15 words was then analyzed using Factor Analysis. The same characteristics proposed by Rye (2006) were maintained in this study, namely, the same number of words he used to identify the perception of the Norwegian countryside using Factor Analysis. Factor analysis is a technique used when there is a large number of variables (15 variables) and they need to be grouped, as in this study. The principal components procedure was used for this analysis. To determine whether factor

analysis could be performed, the Kaiser-Meyer-Olkin - KMO tests and the Bartlett sphericity test were applied. An eigenvalue greater than one was used to define the number of factors. When an item's factor load was greater than 0.5, it was included in a factor (Hair et al., 2009). The reliability of the factors was also confirmed by Cronbach's alpha, with results indicating reliability when they were greater than 0.7 (Micheels & Nolan, 2016). The proposed method allowed us to identify the young participants' perceptions of the rural space.

Finally, in relation to the continuity of the rural family property, we proposed an open question after reading each assigned question twice, and a content analysis was carried out based on considerations on how future agricultural production would be carried out in the region. The responses were classified according to their relevance to farm production. Furthermore, descriptive statistics were used to estimate the percentages of responses in relation to the influence of the five variables on the continuity of family rural property in the region.

4. Youth's perception of the local rural area

Among the respondents, 61% were female and 39% male. All survey participants were students. Upon analyzing the factorial application, the KMO test for sample adequacy resulted in a value of 0.866. The Bartleltt's sphericity test was also statistically significant ($p<0.000$). These tests indicated that factor analysis could be used. We found two factors that had characteristic roots greater than one. These variables explain 71.7% of the total variance. After Varimax rotation, factor 1 explains approximately 38.6% of the variance and factor 2 explains 33%. The first factor (Table 2) is referred to as the "new rural area," and it includes the variables i-production diversification, ii-environmental preservation, ii-soil care, iv-succession, and v-innovation.

The factor's set of variables encompasses the complexity of today's farm production process. This is because the global production market leads to increased competitiveness. The consumer market, particularly those who pay the highest prices for products, has become increasingly concerned about health, environmental, and social issues, as well as animal welfare, which is inherent in the farm production process (Wheeler et al., 2012; Zagata & Sutherland, 2015). As a result, the market can determine the characteristics of the process, implying that professionalization of property management is required to meet demand.

The second factor was titled "good faith," and it included the variables i-faith, ii-cooperation, and iii-honesty, all of which were considered personal to farmers. These aspects may be related to the farmer's understanding of the region's traditional cultural characteristics. It turns out that the rural area has a distinct profile composed of both tangible and intangible characteristics (Murdoch& Pratt, 1993; Halfacree, 1993; Rye, 2006). The first factor in this case is related to tangible aspects, while the second is related to intangible elements pertaining to the social lives of those who own rural properties, live in community, and do rural works. Thus, the youth interpretations of rural areas consider the two characteristics presented in the literature to characterize the space.

Table 2: Matrix of components

	Factor Components		**Communalities**
	1 - New rural area	**2 - Good faith**	
Production diversification	**0.852**	0.227	0.777
Environmental preservation	**0.836**	0.041	0.701
Soil care	**0.804**	0.328	0.754
Succession	**0.669**	0.454	0.653

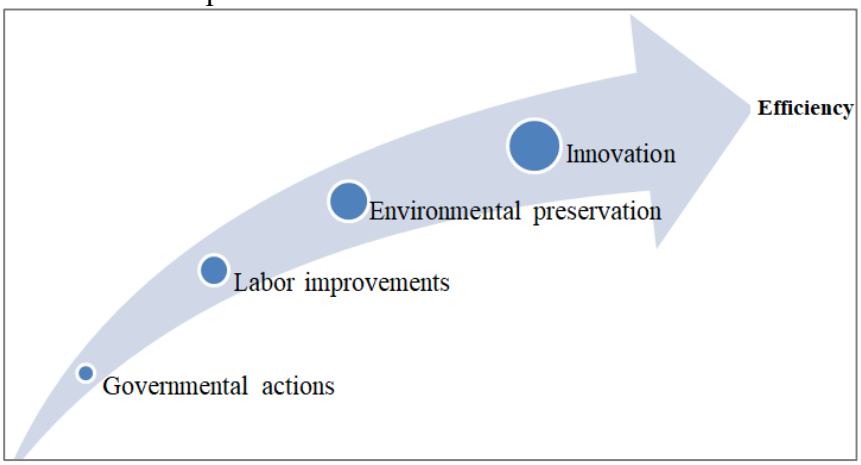
Innovation	**0.634**	0.405	0.566
Faith	0.156	**0.851**	0.748
Cooperation	0.293	**0.858**	0.822
Honesty	0.248	**0.810**	0.717

Source: Created based on survey data.

Regarding the reliability of the factors, the Cronbach' alpha for the first factor resulted in a value of 0.87 and for the second factor a value of 0.85, both values higher than 0.7, the value established for acceptability. From the individual scores of respondents, 56% of participants have a defined perception about the rural area through the variables that make up factor 1, i.e., what we call the "new rural area." While 44% defined their perceptions by the factor 2, "good faith." Thus, the perception of youth about the local rural area is related to the tangible characteristics of this space. Sun et al. (2020) referred to the image of rurality as romanticized by the mass media. The group participating in this research demonstrates that in addition to the rural-related social issues that may favor the idyllic connotation, the local rural area is perceived through its productive needs. That is, the tangible character identified in the perception of young people indicate essential elements for maintaining farm production today.

Furthermore, when asked how they expected agricultural production in the region to change in the near future, the responses could be classified into i-governmental actions, ii-labor improvements, iii-environmental preservation, and iv-innovation. These factors are similar to some components of the first factor unearthed through factor analysis. The frequency of answers is proportional to the size of the circles in Figure 3. The figure indicates that the innovation axis, through technological advancement and access to it, was regarded as the most common answer. Overall, these identified categories are present in the literature as necessary production process characteristics. The main finding in this case is the origin of this information. This knowledge is being reproduced outside of publication spaces, thanks to the learning process of young people. It is an indication that scientific knowledge is being popularly accessible in an underdeveloped country.

Figure 3: Local farm future production



Source: Created based on survey data.

The identified categories are present in the literature as essential components of the rural space. The use of technologies must become more common, so that the farmer's physical presence is reduced, and decision-making and property control can be carried out remotely. Furthermore, environmental sustainability influences economic issues, food supply, and a

location's regional development (Spalding, 2017; Mertz & Merens, 2017; Wang et al., 2018). The rural worker's appreciation (whether the worker is also the landowner or not) and government actions to encourage production and settlement of individuals in rural areas may be related to the land structure and access to land in the location (Rada & Fuglie, 2018). Despite being an agricultural country, Brazil excludes poor people and workers from rural areas as a result of the modernization process, which drives people to urban areas (Santos, 2009). This exclusion occurs as a result of changes in the Brazilian rural productive structure, which prior to 1970 was heavily reliant on human labor and has since become strongly dependent on technology. Rural technologies are difficult to access for small farmers without government funding due to their high investment costs. This characteristic, combined with the natural difficulties of the productive process due to climate, impedes the small farmer's success. Furthermore, as the productive structure has changed, the supply of labor in rural areas has decreased over time, causing people to migrate to urban areas. Brazil had the majority of its population living in urban areas in 1970, and this has been maintained since then, as evidenced by IBGE Demographic Censuses.

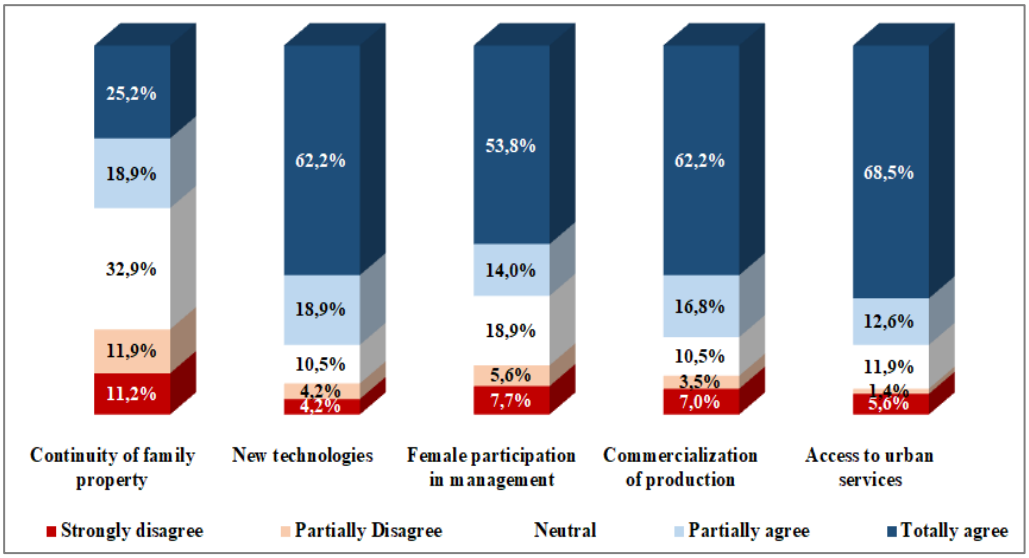
Regarding government actions, from the redemocratization process that took place in 1988, there was a proposal for a process of decentralization of public actions. From this measure, initiatives were carried out with the aim of development in different areas or sectors of the country. Specifically for rural development, many initiatives have been proposed, among them, specific actions for family farmers, which have shown positive results in terms of access to land, increased productivity and, consequently, the permanence of individuals in rural areas (Mattei, 2014).

The influence of the variables i- heir succession, ii- profit from farm production commercialization, iii-new rural technologies, iv-increased female participation in property management, and v-access to services in rural areas (such as running water, electricity, internet, etc.) on the continuity of family rural in the municipality's region was also analyzed (Figure 4), and it is possible to notice that most young people mainly agree with the influence of variables i-new technologies, ii- female participation in management, iii- commercialization of production, and iv- access to urban services on the continuity of family property. The highest percentage is scored neutral for the variable concerning the continuity through heirs. This means that the survey participants do not agree or disagree that heirs are an influential variable in the continuity of the small rural property. However, if the values referring to groups of responses that partially and completely agree are added, we reach a percentage of 70.6% for the importance of the variable for the continuity of the small property. Hence, there is evidence that this is an important variable for the continuation of rural property for a significant portion of the participants. Even though there was no intention in specifying certain participants characteristics, such as being a student of agricultural activities, 61.5% of the participants have parents or grandparents who own rural property. That is, the majority of respondents are potential successors.

Succession in rural properties is perceived as a complex question (Conway et al., 2017). Family farm succession is a lengthy and multifaceted process (Bertolozzi-Caredio et al., 2020). Economic and social factors may influence the decision to transfer a property to a successor (Leonard et al., 2017). However, this process is critical for the survival of family farms (Lange et al., 2013). Furthermore, potential successors of family rural activities who are prepared from an early age are more likely to be interested in the succession (Mishra et al., 2010). Given the municipality's agricultural characteristics, the results indicate the need to broaden discussions on the subject. Specifically, literature suggests that the combination of a lack of successors and farmland concentration caused by structural changes may result in the disappearance of farm-specific knowledge. The latter is the knowledge created and shared by

generations of farmers in a particular rural area. Land use may shift, which may or may not be related to traditional rural activities like food production (Carillo et al., 2013). Even if other owners (individuals or corporations) acquire land without heirs and increase their agricultural production scale, these gains cannot be said to compensate for the loss of specific human capital in each rural property (Bertoni & Cavicchioli, 2016).

Figure 4: Percentage of answers per variable influencing small rural property continuity



Source: Created based on survey data.

Still, when respondents were asked, "Are you drawn to the rural lifestyle?" 78% of all participants affirmed they were attracted to the rural lifestyle, while the remainder were not. In the first group, 50% of respondents believed that this attraction depends on the existence of favorable economic and social conditions. This response is associated with the image the youth form of the rural space illustrated in the research, and it also expresses their interest in being involved with this lifestyle. This empirical finding is related to the question raised by Spanevello and Lago (2008), who state that the probability of young people remaining in rural areas is higher in rural properties that are well capitalized and have favorable conditions for income generation, work, and management.

It can also be seen that the image of the rural space portrayed in the research has variables in common that the youth regard as necessary to achieve the efficiency of future local agricultural production (environmental issues and innovation). Other items mentioned in this context, such as government actions and labor valuation, are components that, when understood as inserted in the agricultural context, can aid in the continuity of family rural property, given the respondents' comments about the existence of good social and economic conditions for them to feel attracted to the rural lifestyle. Furthermore, two components identified in the literature as favorable to the permanence of young people in rural areas and, as a result, of on-site activities are related to what the respondents listed in this research. The first is the long-term connection that the youth form with the activities developed on the properties (Bednakov et al., 2016). The social recognition of rural work can help to strengthen the link between the youth and the activities developed based on the social status created.

The second is government incentives through public policies aimed at retaining people on rural properties (Bednakov et al., 2016). Suess-Reyes and Fuetch (2016) and Morais et al. (2018) revealed that larger properties are more likely to pique the interest of future generations in continuing their activities due to the possibility of greater economic return. Therefore, the

need for government investments, primarily in small and medium-sized properties, should be considered in order to encourage the continuation of their work activities. This appears to be the best option for continuing rural activities, avoiding, for example, the sale of the property to farmers who own nearby rural properties. In the case of Brazil, government investments are critical to avoid or reduce new land concentrations, as this process undoubtedly influences regional rural development.

5. Final Remarks

According to the findings of this study, the youth perceptions of rural space address two distinct factors. The first refers to the requirements for more efficient farm production, which includes issues such as technological innovation and the environment. The second characteristic is related to people and cultural aspects concerning farmers, which are associated with the image of this space for young people. These identified issues are not considered exclusive because they complement one another by depicting aspects related to production and farmers, which aid in the social construction of rural property.

For the young research participants, the rural image consists of both tangible and intangible elements related to the rural area. They are identified in the literature as being unique to this space. We can define the image of young Chateaubriand citizens on the rural of the municipality as a combination of traditional farmer characteristics and current farm production features. This characterization indicates that the municipality's youth are aware of trends in the rural productive process. Nonetheless, as Rye pointed out, the bucolic profile associated with the rural space portrayed in other locations was reduced (2006). When considering the rural environment as a productive space, this question can be intriguing.

Furthermore, future local farm production should include a set of elements (i-government actions, ii-labor improvement, iii-environmental preservation, and iv-innovation) identified as important to production efficiency for the youth. The results show that the continuity of rural property is related to various variables. However, the permanence of young people in rural areas is not yet recognized as an important variable in the continuity of ownership for the majority of the youth who participated in this study.

Because the country is, in general, going through a rural population aging process and will need to discuss the continuity of rural properties, the research results may be relevant to encourage further research using primary data in Brazil related to the subject, mainly because the majority of its population has been located in the urban areas of municipalities since 1970. Furthermore, the country has an uneven agrarian structure in general, so if the rural exodus of young people continues or increases, the commercialization of rural properties will take place. In addition to the problems already mentioned in the literature (loss of knowledge and rural human capital), the process of land concentration and, as a result, income inequality in rural areas should be expanded.

Finally, by not identifying the young person as a necessary component for the property's continuity, the participants demonstrate the importance of encouraging discussions about this topic in the municipality. The relationship and continuity of this group of people with the rural productive process should be discussed. This initiative can be carried out by local government agents as well as by private sector companies and cooperatives operating in the sector.

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