



Generational succession in agriculture: academic debate and scientific trends

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ABSTRACT: The present study, detailed a survey of the academic debate and scientific trends regarding generational succession in agriculture. Hence this study is categorized under quantitative and qualitative bibliometric research. For this research, the Scopus database was accessed to identify scientific articles from publications between the years 2010 and 2021. The search, which included keywords like “successors” and “farm”, resulted in 57 relevant articles. For the study, eleven thematic categories were selected, viz., Factors that influence generational succession; Gender issues in generational succession; Educational aspects in succession; Coping strategies in relation to the future of rural properties and utilization of agricultural land; Succession planning; Issues related to the dairy farming activity and the presence of successors; The role of rural youth in the succession; Socioeconomic effects on rural properties from the presence of successors; Agricultural transfers to “new” farmers; Emotional and belonging aspects in generational transfer; and Relationships and perceptions of non-successors with respect to rural property and succession. However, the factors that affect generational renewal and gender issues in generational succession are the themes that recur most often in the research. Europe is in the forefront in terms of research on succession, and reveals new research pathways and is on the frontline for the development of public policies on generational succession in agriculture. Finally, the other emerging themes were observed to be those which dealt with the relationship that exists between the emotional aspects and succession, as well as agricultural transfers to “new” farmers.

Key words: rural development, aging, rural youth, rural migration.

Sucessão geracional na agricultura: debate acadêmico e tendências científicas

RESUMO: O objetivo deste estudo foi mapear o debate acadêmico e tendências científicas sobre a sucessão geracional na agricultura. O presente estudo se classifica como uma pesquisa bibliométrica quantitativa e qualitativa. Para a realização dessa pesquisa foram selecionados artigos científicos na base de dados Scopus, compreendendo as publicações entre o período de 2010 e 2021. As palavras-chave usadas para a busca foram “*successors*” e “*farm*”, resultando em 57 artigos selecionados. Os resultados do estudo permitiram identificar onze categorias temáticas: fatores que influenciam na sucessão geracional; questões de gênero na sucessão geracional; aspectos educacionais na sucessão; estratégias de enfrentamento em relação ao futuro de propriedades rurais e uso de terras agrícolas; planejamento sucessório; questões relacionadas à atividade leiteira e a presença de sucessores; o papel dos jovens rurais na sucessão; Efeitos socioeconômicos nas propriedades rurais a partir da presença de sucessores; transferências agrícolas a “novos” agricultores; aspectos emocionais e de pertencimento na transferência geracional e; relação e percepções de não sucessores com a propriedade rural e a sucessão. Os fatores que influenciam na renovação geracional e as questões de gênero na sucessão geracional estão entre os temas mais recorrentes nas pesquisas. A Europa se destaca nas pesquisas sobre sucessão, indicando novas linhas de investigação e estando à frente no desenvolvimento de políticas públicas de sucessão geracional na agricultura. Por fim, se identificou como temas emergentes aqueles que envolvem a relação entre aspectos emocionais e sucessão e transferências agrícolas a “novos” agricultores.

Palavras-chave: desenvolvimento rural, envelhecimento, juventude rural, migração rural.

INTRODUCTION

The future of agriculture, to a high degree, is dependent upon the agricultural workers, with respect to both number and age, as well as on the levels of entrepreneurial skill, education, knowledge, ambition, values and capability (COOPMANS et al., 2021). However, rural development faces

a few obstacles, such as migration of younger population from the rural areas, aging agricultural population and absence of successors (MORAIS et al., 2017). Some of the prominent obstacles include, abandoning the agricultural land (ZOU et al, 2018); below-the-potential increase in the non-agricultural sector (RAJPAR et al., 2019); disconnection from family activities and the old traditions (FISHER &

BURTON, 2014); decline in the farms, with respect to the utilization of investments and technologies (ZAGATA & SUTHERLAND, 2015); and reduction in the intangible assets, namely local knowledge (LOBLEY et al., 2010).

More important is that food production and food security are adversely affected by the lack of generational succession (CHISWELL, 2014; CHISWELL & LOBLEY, 2018; DUESBERG; et al., 2017). Another area of convergence is the aspect of masculinization in agriculture, in light of the gender inequalities that are most often prevalent in the rural regions (ARENDS-KUENNING et al., 2021; BALAINE, 2019).

In the face of such a context, there has been a recent increase in the literature, focused on a variety of aspects linked to succession (WHEELER et al., 2012). Although, this is a subject, increasingly investigated, MORAIS et al. (2017) indicated a few limitations in the scientific studies published, emphasizing: a) the lack of a theoretical basis; b) most research in agricultural succession, particularly in Brazil, have been conducted with a qualitative approach and using small samples, in particular areas. Such features, in the studies, pose difficulties in terms of generalization of the results for other regions, as well as in the application of these results to the development of public policies for the encouragement of potential successors to acquire farm control (MORAIS et al., 2017).

In light of the theoretical and empirical limitations, the objective of the present study was to map the academic debate and scientific trends available on generational succession in agriculture. Through this effort, the present research facilitated the identification of scientific gaps, as well as generate advancements for the scientific community. To accomplish this intention, it plans to inspire the investigation of new research issues related to the subject of generational succession in agriculture, which means identifying the research problems, as well as the questions that continue to remain unanswered, and encourage discussions on the subject in question.

METHODOLOGIES

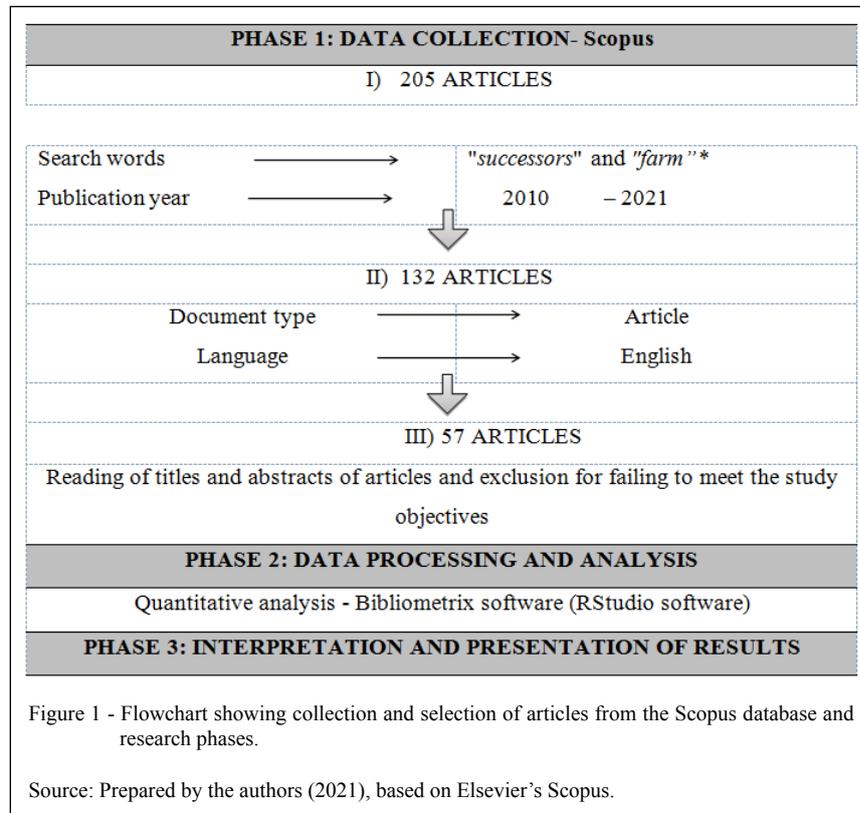
Quantitative and qualitative bibliometric analysis methodologies were employed in the present study, done in March 2022. In qualitative bibliometric analysis the interpretation of the bibliometric data is performed in a deeper and more qualitative manner, than merely in a quantitative way. Quantitative

bibliometrics deals with objective measures, such as the number of citations, impact factors and H-index; however, qualitative bibliometrics deals more with the subjective aspects, including document content and quality of the references cited (MOED, 2005; GLÄNZEL, 2004).

In qualitative bibliometrics, qualitative research methodologies are applied, like the analyses of content and citation, in order to study the quality and relevance of the publications on a specific topic (MOED, 2005; GLÄNZEL, 2004). This method is useful in the identification of the trends, gaps or areas of interest within a particular aspect of research, as well as to evaluate the quality and influence of a particular publication or author (CRONIN & SUGIMOTO, 2014; LOWRY et al., 2004). In brief, the approach of qualitative bibliometrics is more interpretive and subjective in nature, through which a better understanding can be reached in terms of the qualitative aspects of scientific publications and the ways in which they impact the increase in knowledge in a given area of interest (CRONIN & SUGIMOTO, 2014).

In light of this definition, the present research adopted the steps of bibliometric analysis according to WALTMAN & VAN ECK (2013): a) Data collection; b) Data processing and analysis; c) Interpretation and presentation of results. Details regarding the same are given below and illustrated in figure 1.

a) Data collection: In this step, the pertinent information sources were identified and data required for the analysis were collected; then, the next steps listed below were followed: I) Definition of the Scopus international database from which the references for analysis were collected. This database was picked, as it is regarded as the most extensive database of the abstracts and citations of peer-reviewed articles in the literature (PALOMO et al., 2017). Access to the database was done through the Federated Academic Community system (CAPES/Brazil). II) The words “SUCCESSORS” and “FARM*” were used for the search, with the objective of observing them either in the title, abstract or keywords, only within the time frame of 2010 to 2021. The time frame was specified because this study investigated only the most recent studies pertinent to the subject, and because the goal was to recognize the research trends. The final count after the search included 205 articles. III) Subsequently, the type of document “articles” was selected, as it refers to the most up-to-date source of knowledge and with the greatest impact (LÓPEZ-FERNÁNDEZ et al., 2016). Only articles in the “English” language were considered, since the dissemination of scientific knowledge



is fundamentally done in this language (LÓPEZ-FERNÁNDEZ et al., 2016). Adopting these criteria, the articles were restricted to 132 in number. IV) Next, the abstracts were read and the ones that did not have any direct reference to the succession of rural properties were eliminated, reducing the final count to 57 articles. Likewise, articles in which the main objectives and theme did not consider succession were also excluded.

b) Data processing and analysis: This step involved the processing and analysis of the data gathered, by applying the apt statistical techniques and visualization methods. Therefore, patterns and trends were identified and the productivity and impact of the authors or institutions were analyzed. Quantitative analysis was used in this step, utilizing the Bibliometrix Software (RStudio Software) to obtain data pertinent to the descriptive analysis. One of the useful analytical tools, Bibliometrix, is an open-source aid, based on the R programming language. It enables fast and easy bibliometric analysis, which includes building co-authorship and citation networks, analysis of trends and publication patterns, identification of areas of research emerging technologies, besides other capabilities (ARIA & CUCCURULLO, 2017) that are suitable for the qualitative analysis of the 57

articles selected for this study, in line with the aim of this research. To accomplish this, detailed reading-up of the documents helped in knowing the focus of each article. This enabled classifying them on the basis of common themes, in keeping with the comprehension of the authors.

c) Interpretation and presentation of the results: This step includes interpreting and presenting the outcomes of the analysis in an understandable and pertinent format for bibliometric analysis. Hence, the quantitative and qualitative analyses, accompanied by detailed reading of the articles, enabled listing of the principal results of each theme in order to recognize the direction of the study and the similarities or otherwise of the findings. The results and interpretations were presented as charts, tables, figures and descriptive text, to emphasize the chief findings of the present research.

RESULTS AND DISCUSSION

Descriptive analysis of scientific productions on succession

At first, analysis was done of the articles published between 2010 and 2021 (Figure 2). From

the results, it is evident that the number of publications increased from 2018 onwards, and in 2021, 10 articles were published. On analysis of the scientific output country wise, according to the institutional affiliation of the first author, it was evident that Brazil, and the United Kingdom as a close second, are the countries that have the highest number of productions on the subject - 17 in total, as shown in figure 3. Also worthy of mention are Ireland (13 documents), Belgium and the United States (8 documents each), Italy and Sweden (7 and 6 documents), Japan (5 documents), China, Netherlands and Spain having produced 4 documents each.

The most important journals which published material related to succession during the time frame of the analysis are found centered in the European continent, as depicted in table 1. Of these, the journal *Land Use Policy*, boasts the greatest number of publications in the same time span (10); next is the *Journal of Rural Studies* (6), both in England. In third place, with five publications, is the journal *Sociologia Ruralis*, with its headquarters in the Netherlands.

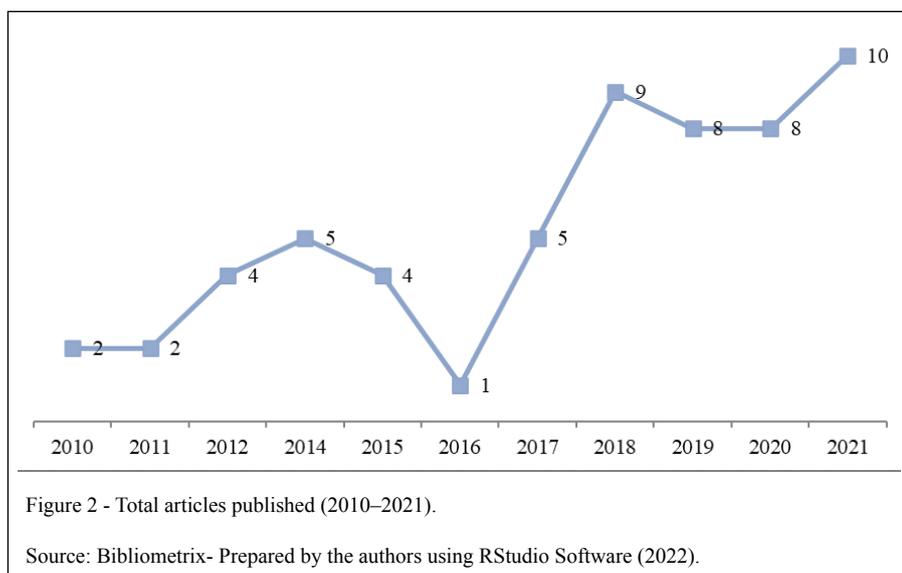
In terms of the institutions of the authors who published on the subject, that most frequently recurred, (Table 2), it became clear that many of them are located geographically across Europe, with the University of Exeter showing the highest recurrence. Apart from the European institutions, universities in Japan and the United States were also prominent in terms of research on succession. It is; however, understood that while research is scattered across this country, in other countries a few authors and institutions grab attention.

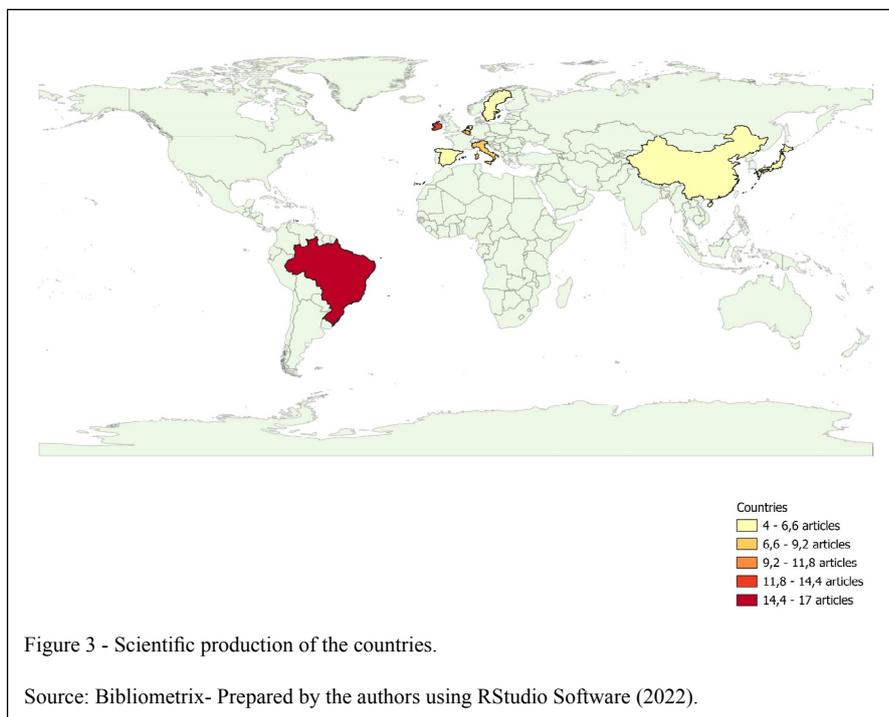
Regarding the research methods that were employed in the 57 articles selected and analyzed, no significant differences were noticeable because in 22 articles quantitative methods were used, while in 23 publications qualitative methods were used. In 12 articles; however, mixed methods had been adopted. From this finding it is clear that one of the limitations indicated by MORAIS et al (2017) with reference to the research in Brazilian generational succession - which is predominantly qualitative - is not applicable to the research papers analyzed.

The domination of the qualitative approaches adopted in Brazil, during research on succession in agriculture is not to be perceived in a negative light; rather, it can be elucidated, citing a few reasons, as the complex phenomenon of cult succession, which *quetiva di succession cults that necessitates quantitative assessment* (BREITENBACH & FOGUESATTO, 2023).

Besides, several studies on succession are performed in rural contexts where it is more difficult to collect quantitative data because of the poor availability of information or the inability to gain technological access. The reason for the selection of qualitative approaches is perhaps the priority they place on understanding the perspectives and experiences of the participants involved in the succession, namely the family members, and the significance given to the comprehension of pertinent experiences, like interviews and case studies.

It must be understood; however, that in Brazil, while qualitative research on succession is a predominant trend it is not the rule. In Brazil,





studies on succession in agriculture are available in which the quantitative approach or a combination of qualitative and quantitative methods are used in their analyses. The results of the present research revealed that research on succession in other countries also utilizes a variety of approaches, in the choice of the methodology. This may be linked to the differences in the infrastructure of the study, resources available for the collection and analysis of the quantitative data in each country, the aim of the research, discipline or the perspective weighted in emo contexts.

In continuation of the discussions, the section that follows this one gives the findings of the qualitative bibliometric analysis on the basis of the

detailed reading and appreciation of the content of the 57 articles selected.

Generational succession and its consequences: literature analysis

Table 3 gives a brief account of the chief themes investigated through the analysis of the research papers, the number of articles which focus on each of the themes, countries where the research was performed and the respective authors. Next, the thematic classes are presented, on the basis of the references analyzed.

a) Factors that influence generational renewal: This has been the research topic investigated the most by the academic community, focusing on

Table 1 - Main journals with publications on the subject.

Journal	WOMEN	Country
Land Use Policy	10	England
Journal of Rural Studies	6	England
Sociologia Ruralis	5	Netherlands
Agriculture	3	Switzerland
EuroChoices	3	England
Sustainability	3	Switzerland
Canadian Journal of Development Studies	2	Canada

Source: Bibliometrix-Prepared by the authors using RStudio Software (2022).

Table 2 - Main institutions of the authors.

Institution	WOMEN	Country
University of Exeter	4	England
Chiba University	3	Japan
Indiana University	3	USA
National University of Ireland	3	Ireland
Queen's University Belfast	3	Northern Ireland
Swedish University of Agricultural Sciences	3	Sweden
University College Dublin	3	Ireland

Source: Bibliometrix- Prepared by the authors using RStudio Software (2022).

self-generational succession, over the last ten years. From the number of articles on this topic and post analysis of the research published on it, (from 2012 to 2021), it seems to be a tradition in academic studies. Studies like these demonstrated that the potential successors will not, in all probability, be successors for a variety of reasons. A few reasons may be, the size (FOGUESATTO et al., 2015), income and degree of mechanization present in the farms (PESSOTTO et al., 2019); further, the number and gender of potential successors (CAVICCHIOLI et al., 2015), as well as the traits of the farmer (age, sex and education) are other pertinent reasons (SHAHZAD et al., 2021).

b) Gender issues in generational renewal in agriculture: For surveys done adopting this theme, the results were unanimous, particularly for the fact that the male child is preferred to be the successor in the family properties. Young women, in comparison to young men, are largely ignored and given less encouragement by their parents to stay back as successors, on the property. (BREITENBACH & CORAZZA, 2020). In a bibliographical study done earlier, research collected from different parts of the world, had already observed gender differentiation in generational succession in agriculture, where men are given priority in the process of succession (BREITENBACH et al., 2021).

c) Educational aspects related to succession: Researchers have understood education from two biased perceptions. The first bias showed that programs with the goal of educating and training helps farmers broaden their identity, and develop a wider perspective and build more extensive human networks from opportunities (OHE, 2014; OHE, 2015; OHE, 2018). However, the access that potential successors have to the third-level of education becomes an opening to embrace non-agricultural careers. But even though such avenues are open, no evidence is

observed of any rise in the rate of land sales, which is no surprise, because of the attachment that farming families feel for their land (CASSIDY, 2017).

d) Coping strategies in relation to the future of rural properties and use of agricultural land: From the research performed, it is evident as the rural landowners begin to age and face the additional stress caused by the unavailability of succession of successors, they need to learn to cope with this problem because a final destination for the lands must be decided. Under such conditions, the land needs to be sold or leased, which necessitates the selection of a tenant or buyer. This individual must be chosen with care, taking into serious consideration their values and motivations, not restricting it to monetary gain alone, but to rural and social interactions plus agricultural concerns. In certain cases, a relationship between the owner (who becomes the "ex-farmer") and the tenant or buyer develops, which bears resemblance to family bonds (GRUBBSTRÖM & ERIKSSON, 2018), after more time is spent in agriculture (ZOU et al., 2018). There are other positive options as well, like leasing part of the land or going into partnership with a younger farmer (DUESBERG et al., 2017).

e) Succession planning: This theme recurs in the research studies, thus proving that the succession planning programs enable the older farmers to handle the process of succession, and prepares them to accept a succession of successors. Succession programs; therefore, exert a positive effect upon the deeper degree of knowledge and confidence gained by all the participants (JOHNSON & CARLSON, 2021). However; although, a large percentage of the farmers realize the significance of planning estate succession, less than half of them actually possess a succession plan (AROWOLO et al., 2017).

f) Dairy activity and generational succession: In light of its uniqueness of character,

Table 3 - Main thematic categories studied in all the articles analyzed.

Main thematic categories	Countries where surveys were conducted	Authors
Factors that influence generational succession (14 articles)	Brazil; Italy; Pakistan; Netherlands; England; Sweden; Romania; Bulgaria; Slovenia; Scotland; England; Spain	MORAIS et al. (2017); MORAIS et al. (2018); CAVICCHIOLI et al. (2018); PESSOTTO et al. (2019); SHAHZAD et al. (2021); CAVICCHIOLI et al. (2015); COOPMANS et al. (2021); ABDALA et al. (2021); KERBLER (2010; 2012); FOGUESATTO et al. (2020); FISHER & BURTON (2014); CHISWELL & LOBLEY (2015); BERTOLOZZI-CAREDIO et al. (2020).
Gender issues in generational succession (7 articles)	Australia; Ireland; England; Estonia; Brazil.	LUHRS (2016); BALAINE (2019); GLOVER (2014); GRUBBSTRÖM & SOOVÄLI-SEPPING (2012); BARBOSA et al. (2020); BREITENBACH & CORAZZA (2020); ARENDS-KUENNING et al. (2021).
Educational aspects in succession (7 articles)	Japan; Ireland; Malaysia; China.	AH (2014; 2015; 2018); POEM (2017); FROMM (2012); SAMA & QAIM (2011); SHEN et al. (2021).
Coping strategies regarding the future of rural properties and use of agricultural land (6 articles)	Sweden; China; Pakistan; Ireland; Thailand; Ireland.	GRUBBSTROM & ERIKSSON (2018); ZOU et al. (2018); RAJPAR et al. (2019); DUESBERG et al. (2017); JANSUWAN & ZANDER (2021); LEONARD et al. (2017).
Succession planning (4 articles)	Nigeria; USA; England; Finland.	AROWOLO et al. (2017); JOHNSON & CARLSON (2021); CHISWELL & LOBLEY (2018); VÄRE et al. (2010).
Issues related to dairy activity and the presence of successors (4 articles)	Netherlands; Brazil; USA; Ireland	FIRMAN et al. (2019); BÁNKUTI et al. (2018); DONG et al. (2016); O'DONNELL et al. (2011).
The role of rural youth in the succession (4 articles)	European Union.	ZAGATA & SUTHERLAND (2015); CHISWELL (2014; 2018); COOPMANS et al. (2021).
Socioeconomic effects on rural properties from the presence of successors (3 articles)	Australia; Belgium and Germany; Italy	WHEELER et al. (2012); PITSON et al. (2020); CORSI et al. (2021).
Agricultural transfers to "new" farmers (unrelated to the rural region) (3 articles)	Northern Ireland; Austria; USA	JACK et al. (2019); KORZENSZKY (2019); VALLIANT et al. (2019)
Emotional and belonging aspects in generational transfer (3 articles)	Northern Ireland; Spain; Germany	HOLLOWAY et al. (2021); PLANA-FARRAN & GALLIZO (2021); SCHLUMBOHM (2022).
Relationship and perceptions of non-successors with rural property and succession (2 articles)	Ireland; Holland	CASSIDY & MCGRATH, 2014); MATSER et al. (2020).

Source: Prepared by the authors (2022), based on the Scopus database.

dairy cattle farming is most often one of the sectors that are explored in studies dealing with generational succession. Most young farmers identify the negative features of the work, stating that labor on dairy farms involves time and effort, pays low salary, is a dirty and unappealing activity and fails to provide possibilities for potential jobs in the future (FIRMAN et al., 2019). Therefore, the hard work that this activity demands can pose a threat to family succession over the long term (BÁNKUTI et al., 2018; FIRMAN et al., 2019).

g) The role of rural youth in succession: Research highlights a set of actions crucial to tackle the challenge of introducing young persons and

sparkling their interest in the succession process in the European Union and which can stimulate them to also(a) define with clarity the precise problem of generational renewal because the data available fails to provide concrete and uniform evidence of an existing problem experienced by young farmers (b) explain the current policies which can support and facilitate the process of farm transfer and provide steady assistance during the early stages of their farming career, but without interfering in the stage prior to farm-acquisition, a kind of detached suicidal period for the participants; c) boost the appeal of agriculture as a wise and good occupational and lifestyle choice; d) enable

policy makers to simplify the access to land and labor as a high priority issue and accommodate the capital intensive character of agriculture; e) combine policies as this is urgently needed at a variety of levels, and domains that logically and lucidly facilitate achieving the redefined goals in the context of generational renewal; (f) forge the link for generational renewal (COOPMANS et al., 2020).

h) Socioeconomic effects on rural production units from the presence of successors: In rural establishments the identification of a successor is related positively to improved management, both in the present and future. Properties lacking a successor will more probably fall into a stagnation period, like land sales and not making improvements to the infrastructure (WHEELER et al., 2012). Besides this, the decline in the number of family farms is greatly influenced by the absence of successors and the average age of the farm operators (CORSI et al., 2021). A study performed in Europe highlighted that the absence of successors inspired adaptations that made way for new opportunities, for studying other options and paths to seek higher economic prosperity at the regional level. These findings do not concur with the central concept of some studies, and in some cases of many of the CAP policies (Common Agricultural Policy) of the European Union, where it is contextualized that the more the agricultural succession the better the European agriculture (PITSON et al., 2020).

i) Agricultural transfers to “new” farmers who have no relationship with the rural environment: This is a rather new theme that features in the research on succession, likely due to the relationship it has with the recent culture. The characteristics of this reality includes extra-family agricultural transmission and places elderly farmers who lack successors in groups with young people who desire to go into agriculture, but need to overcome several barriers to gain entry, like economic, social and cultural hindrances scale and improve food security and sovereignty (KORZENSZKY, 2019). However, for the new entrants into agriculture to succeed will depend on the profitability of the agricultural venture, the age of the farmer when he identifies a successor, the stage at which the life cycle of the household is at the time of selecting a successful rural successor familiar a do a religious (JACK et al., 2019).

j) Emotional ties and belonging aspects in generational transfer: This theme has also been recognized as one that is growing in popularity in the research being done on family succession in agriculture. Apart from economic factors, the value of the aspects of ‘emotional ties and belonging’ in the processes

related to generational succession in agriculture has become the focus of several researches. In succession planning, complex relationships exist between the ‘longing to belong’, the emotional bonding to family farming and the challenges connected with the structures, expectations and patrilineal agricultural identities necessary to the process. There is agricultural retirement and succession planning to inform future rural development policies aiming the sustainability of family farms (HOLLOWAY et al., 2021).

The affective or emotional relationship that is present among the family members causes the probability of a decision by the son to continue pursuing agriculture as a successor; this action can support the actions of the parents and older relatives in their relationships with the next generation. Such actions should center on facilitating the potential successors to gain deeper knowledge and understanding of the business, motivating them to comply and contribute to the objectives of the farm (venture) and spark within them a sense of belonging, thus enriching the affective relationship of family bonding (FRANCIS, 2021).

k) Relationships and perceptions of non-successors with rural property and succession: This theme appears to be suitable for research in the future, in light of the paucity of studies conducted on it, particularly in Brazil. In farming families with more than one offspring, it is quite normal for a few of the children to venture into careers and destinations other than agriculture and generational succession. However, research done on the subject has most often ignored the position of the descendants of those farmers who, either due to need or choice, conduct their lives far from the rural property (CASSIDY & MCGRATH, 2014). It must be remembered that ‘non-successor’ children have strong ties to the farm as a long-lasting place in their hearts, which suggests a yearning to retain the farm within the family. Although, these children have not experienced the succession process, they possess a collective and an established or fixed sense of ownership; a consciousness of responsibility in continuing the legacy and intergenerational durability; and the understanding and expression of the farm as a treasure-house of their memories (CASSIDY & MCGRATH, 2014).

Concurrently, the non-successor siblings (brothers) are content to accept the outcomes of the succession process, as they are guided by their understanding of the justice of the process itself and by the arrangements that the patriarch and successor have decided upon, in light of these results. Although, they may entertain discordant perspectives regarding

justice, they overcome these conflicting thoughts as they are motivated by a common objective, which is to retain and safeguard the continuity of family farming (MATSER et al., 2020).

Finally, from the findings of the present research, the European continent is obviously prominent in studies and publications on generational succession in agriculture. All the themes thus recognized and listed, right through the period under consideration, reveal that the studies have been conducted in Europe. This serves to imply that works on this subject show greater advancement and act as a reference for the research being performed across the rest of the globe, right from defining the focus or theme to be explored, to the adoption of the outcomes as comparatives and parameters. It is also not a coincidence that a few European countries, in comparison to other continents, have attained a more advanced stage of developing certain public and agricultural policies with respect to generational succession in agriculture.

FINAL CONSIDERATIONS

From the spectrum of themes investigated, the factors that affect generational renewal feature in the most frequently recurring themes in research, both in terms of the number of articles and authors, as well as in the countries that explored this theme. Apart from this, the theme cited, has a tradition in academic research that were done from 2010 to 2021, the period of analysis. These results clearly reveal that, despite the evidence of a tradition in research that deals with the factors that affect generational renewal, this remains a highly current subject, particularly because it includes the economic, productive and technological positions linked to rural properties, as well as the emotional, psychological and personality traits of the potential successors.

From the findings, it was quite easy to deduce that Europe is prominent in the research work done and in publications related to succession, which reiterates that this continent can be a reference point for researchers from other regions of the world. Europe is also the continent where new streams of research are springing up on subjects that propel both debate and research in other countries across the globe.

It is also significant that several of the topics explored during the time period analyzed continue to recur in the research done on succession; it is interesting that they will continue to feature in future research as well, as they are research lines that can be investigated to an even deeper level. Apart

from this, the problem regarding the indications that the absence of generational renewal induces in terms of rural properties, and in a broader sense, in the socioeconomic relationships that are established both in the rural and urban regions, is yet to be solved, through research.

Finally, it is striking that in more recent times, studies that focus on agricultural transfers to “new” farmers (not linked to rural regions) and the discernment of the non-successor children regarding the succession process, form part of the research framework. These themes are reliable indicators of new streams of future research. They also throw light on the significance of studying the ways in which the “training process” of new farmers occurs, as it is well recognized that generational succession has a direct relationship to the inclusion and socialization of the offspring into agricultural work. Hence, it becomes vital to explore whether courses in training and gaining qualifications will suffice in these processes.

One more research theme that is emerging relates to the relationship between generational succession and the emotional and family dynamics of the farmers. More recently, this theme has been noticed coming into several scientific articles; although, it is still less investigated, revealing it to be an aspect of further study for the researchers, in future. Further, note must be taken that most of the research analyzed can be applied globally to suit the contexts of other countries and, even if extensively explored, may continue to be an arena of study in other parts of the world.

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DECLARATION OF CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

AUTHORS' CONTRIBUTIONS

All the authors made equal contributions toward the manuscript design and writing. Critical review of the manuscript was done by all the authors and the final version was approved.

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