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Survey on Publications that Discuss added Value in Family Farming

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Abstract— *It is known that family farming, besides being responsible for a large part of the food products put on the Brazilian table, is the source of survival for many families. Thus, to value the family farmer is to enable this value chain to be continued and to grow. This paper aimed to survey the publications that discuss added value in family farming. To this end, exploratory research of a qualitative nature was used. The research sought articles in the Web of Science indexing bases, SCOPUS, SCIELO, SPELL, in addition to the CAPES Publications Portal. The journals Horticultura Brasileira and Revista Brasileira de Fruticultura were also searched. The results pointed out that the articles discussed 10 variables of value addition, and short circuits, organic production, and agriculture industrialization were the most used. However, it was realized that there are several other ways that rural family farmers can use to add value to their products and thus be better remunerated. Therefore, a research gap was found, since, besides the existence of other adding variables, rural producers must consider the extremely fluid context in which they are inserted.*

I. INTRODUCTION

It is known that nowadays, products are increasingly similar, and it is often not possible to identify the producer/brand. With agricultural products, this is even more accentuated since they are commodities. Thus, differentiating the product in the market is essential to remain in the market, which is increasingly competitive.

The differentiation of products can happen in many ways, as long as you pay attention to what is important to your consumers. Knowing this, value is added to the product in order to draw the consumer's attention so that he or she prefers a certain product or brand and is willing to pay a higher amount to get it.

When it comes to manufactured products, attracting the consumer's attention is a little less complex, despite the number of competitors. It is common for companies to use differentiation of product, adding value through unique features, functionality, or aspects, by distribution channel, which involves easier access to the consumer, by image, which encompasses the creation of a brand, logo, and other elements of visual identification, by employees, which covers a better qualification of employees to deal with consumers, and by services, which has elements such as delivery, assembly, billing, among others, according to Kotler and Armstrong (2015).

As for commodities, although they can also use these differentiations, this is not often seen in producer fairs and supermarkets. Because they mostly use short distribution chains, or at most, have an intermediary, it is necessary that rural family producers can add value to their products, since, in this way, they will be better paid, allowing them a better quality of life and permanence in their property.

Thus, given this context, the research issue is: What are the main variables used to add value to rural family

production? Therefore, the objective of this study is to raise, in the publications, the variables addressed for adding value in family farming.

II. METHOD

To reach the proposed objective, the type of research used was exploratory, which, according to Lakatos and Marconi (2010), is the one that allows the researcher to get closer to the phenomenon studied. As for the nature of data analysis, this was qualitative. According to Richardson et al. (2008), the qualitative nature does not use statistical tools in its analysis, instead, it considers the main nuances in the data collected.

Publications on adding value in family farming available on the Web of Science, SCOPUS, SCIELO, SPELL, and the CAPES Publications Portal, were analyzed. The journals *Horticultura Brasileira* and *Revista Brasileira de Fruticultura* were also searched. The intention in using these journals was to obtain information in specialized sources about horticultural products. The research clipping was cross-sectional, and the collection took place in 2018 and 2019.

The inclusion/exclusion parameters for the selection of articles were as follows: on June 5, 2018, the descriptor 'family farming' was used in the SPELL database, the period limitation was between 2008 and 2018. As for the type of document, this was limited to full articles and abstracts of theses/dissertations, the type of access was limited to free, and the areas of knowledge were administration and engineering. The result was 92 articles and thesis/dissertation abstracts, and from these 7 were selected. Using the same parameters, the descriptor was changed to vegetables. The result was 11 articles and abstracts of theses/dissertations, three were selected.

On July 13, 2019, the descriptors add* value and value add* AND family farm* OR orcharding were used in the SPELL database. The period was limited from 2008 to 2019, the type of document: article, the area of knowledge: administration and economics, and the type of access: free. However, in SPELL database, there was no occurrence.

In the SCOPUS database, the knowledge area was changed to Agricultural and Biological Sciences, Social Sciences, Multidisciplinary, Economics, Econometrics and Finance and Business, Management and Accounting, the other parameters remained the same. The result was 78 articles, and 7 articles were selected.

On July 20, 2019, in the Web of Science database, the descriptors add* value AND value add* AND family farm* OR orcharding were used. The period was limited between 2008 and 2019, the type of document: article, the type of access: free, and the selected knowledge areas were horticulture, Management, Multidisciplinary sciences, Economics and Business. 164 articles were obtained, from these, 7 were selected.

The *Revista Brasileira de Fruticultura* (Brazilian Journal of Fruit Culture) was also searched using the descriptor Agricultura Familiar (Family Farming), and the result was 2 articles, which were selected, and the *Horticultura Brasileira* journal resulted in 2 articles, one of which was selected. In the Periodicals Portal, in the search by subject item, the following parameters were used: period: the last two years, document type: articles, and access type: free. The descriptors used were Added Value AND Family farming. The search resulted in 15 articles, 3 of them were selected. Figure 1 shows the selection process adopted.

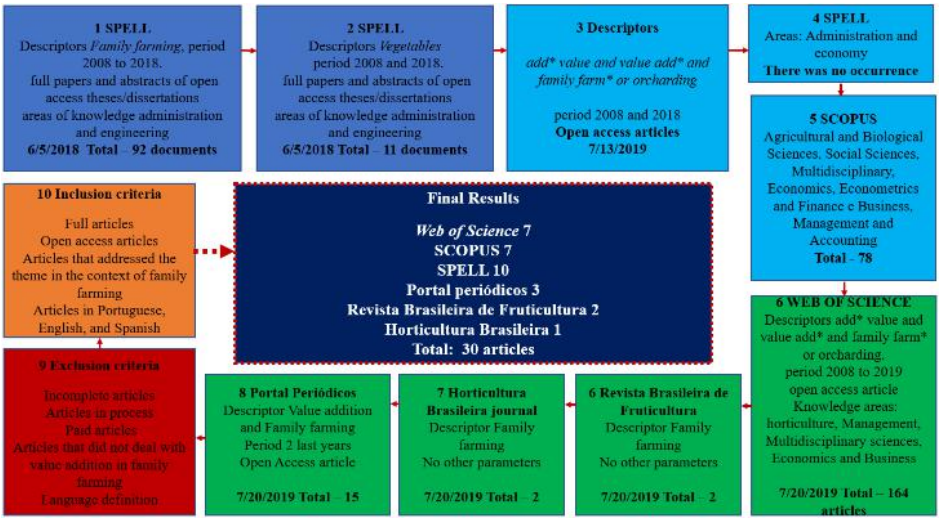

Fig.1: Inclusion and exclusion criteria for the selection of materials
Source: Prepared by the authors, 2019.

As it can be seen, a total of 30 full articles was selected, with free access in Portuguese, English, and Spanish, which discussed added value in family farming.

After a full reading, for the data analysis, there was a new process of exclusion of the articles that ran away from the objective of this study, which is to raise in the publications the variables addressed for added value in family farming, thus remaining 10 articles. The NVIVO® and UCINET® software was used for content analysis.

III. RESULTS AND DISCUSSION

As mentioned, after the second exclusion, 10 articles were selected and analyzed in order to answer the research question: What are the main variables used to add value to rural family production? These are shown in chart 1.

Chart 1 Data from the selected articles

N	AUTHOR	TITLE	JOURNAL	COUNTRY
WEB OF SCIENCE				
1	(PARODI, 2018)	Agroecological transition and reconfiguration of horticultural work among family farmers in Buenos Aires, Argentina	Cahiers Agricultures	Argentina
SPELL				
2	(ROCHA; COSTA; CASTOLDI, 2012)	Comercialização de produtos da agricultura familiar: um estudo de caso em Passo Fundo – RS	REIMED - Revista de Administração IMED	Brazil
3	(FREITAS; RIBEIRO, 2013)	Experiences of agro-extractivist commercialization of family farmers of Rio dos Cochos, Januária/Cônego Marinho - MG	Organizações rurais & Agroindustriais	Brazil
4	(GODOY; WIZNIEWSKY, 2013)	The role of pluriactivity in strengthening family farming in the municipality of Santa Rosa/RS	Desafio online	Brazil
5	(FOGUESATTO; MACHADO, 2017)	The decision-making process in the creation of units that add value to agricultural production: the family agribusinesses	Desenvolvimento em questão	Brazil
6	(CAUMO; STADUTO, 2014)	Organic production: an alternative in family farming	Revista Capital Científico	Brazil
SCOPUS				
7	(CAMPOS; VALENTE, 2010)	The construction of the coffee market in Alto Paraíso de Goiás	Revista de Economia e Sociologia Rural	Brazil
8	(AGUIAR; DELGROSS; THOMÉ, 2018)	Short food supply chain: characteristics of family farming	Ciência Rural	Brazil
PORTAL PERIÓDICOS				
9	(FERREIRA, 2017)	Added value in family farming products from Foz do Iguaçu -PR: the case of the agribusiness Delícias do Campo	Revista Latino-americana de Estudos em Cultura e Sociedade	Brazil
HORTICULTURA BRASILEIRA				
10	(HENZ, 2010)	Challenges faced by family farmers in strawberry production in Distrito Federal	Horticultura Brasileira	Brazil

Source: Prepared by the authors, 2019.

The largest contribution of empirical studies on adding value in family farming comes from Brazil. The studies varied by crop, involving coffee, fruits, vegetables, and legumes, and by region, ranging from the South to the Center-West of Brazil.

Despite the particularity of each study, the main added value variables discussed in the articles were, Agroecological, Agriculture industrialization, Organic certification, Origin certification, short supply chains, Branding, Diversification, Organic, Quality, and Seal of origin.

Short supply chains, organic production, agriculture industrialization, quality and origin certification were the ways most used by family farmers to add value to their products. Figure 2, using the UCINET® software, shows the relationship between the titles and the variables of value addition.

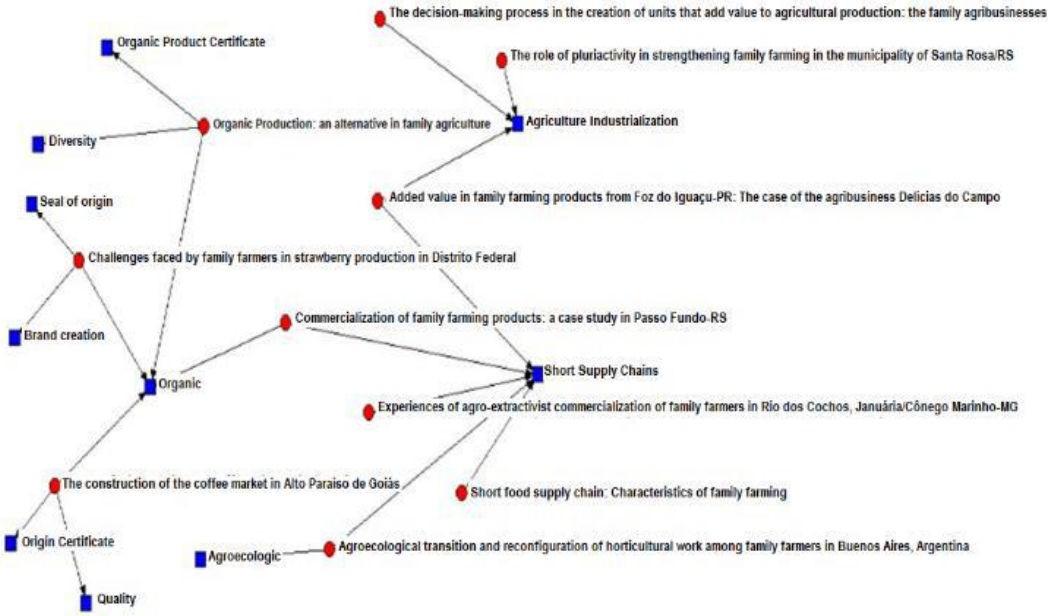

Fig.2: Relationship between titles and variables

Source: Prepared by the authors, 2019.

When verifying the relationship, 5 articles discussed the short supply chains as a way to add value to their products, 4 studies discussed adding value by means of organic production, and 3 of them addressed agriculture industrialization as a way to add value. Agroecological production, crop diversification, organic certification, seal of origin, branding, origin certification and quality were also discussed as a way of adding value. Table 2 shows each variable of added value that was discussed in the selected articles.

Chart 2 – Added value variables discussed in the selected articles

VARIABLES	ARTICLES
Agroecological	1. Agroecological transition and reconfiguration of horticultural work among family farmers in Buenos Aires
Agriculture industrialization	1. Added value in family farming products from Foz do Iguaçu - PR: the case of the agroindustry Delícias do Campo 2. The role of pluriactivity in strengthening family farming in the municipality of Santa Rosa/RS 3. The decision-making process in the creation of units that add value to agricultural production: the family agribusinesses
Organic Product Certification	1. Organic production: an alternative in family agriculture
Origin Certification	1. The construction of the coffee market in Alto Paraíso de Goiás

Short supply chains	1. Added value in family farming products from Foz do Iguaçu -PR: The case of the agroindustry Delícias do Campo 2. Agroecological transition and reconfiguration of horticultural work among family farmers in Buenos Aires 3. Commercialization of family farming products: a case study in Passo Fundo - RS 4. Agroextractivist commercialization experiences of family farmers in Rio dos Cochos, Januária/Cônego Marinho - MG 5. Short food supply chain: characteristics of a family farm
Brand Creation	1. Challenges faced by family farmers in strawberry production in Distrito Federal
Diversification	1. Organic production: an alternative in family farming
Organic	1. The construction of the coffee market in Alto Paraíso de Goiás 2. Commercialization of family farming products: a case study in Passo Fundo - RS 3. Challenges faced by family farmers in the production of strawberries in Distrito Federal 4. Organic production: an alternative in family farming
Quality	1. The construction of the coffee market in Alto Paraíso de Goiás
Seal of Origin	1. Challenges faced by family farmers in strawberry production in Distrito Federal

Source: Prepared by the authors, 2019.

Besides identifying the main elements of added value used in the selected articles, it is also possible to verify that some studies have shown that more than one way of adding value is employed in the same property.

Short supply chains are a more direct way of commercialization between rural producers and consumers, and there may even be an intermediary between them (SILVA et al., 2017). This way of commercialization is the most common when it comes to rural family producers. In addition, it is the least complex way to add value, since it allows relationships with the consumer, which enables the producers to better understand the needs of each customer they serve, allowing them to develop specific offers for specific customers.

With the survey, it was possible to verify that some ways of adding value are more difficult to be implemented by family farmers, since some actions do not depend only on the farmer. As it is the case of organic cultivation, where there are variables that are not controllable by the farmers, such as, how their neighbors cultivate.

According to the Brazilian legislation, a product, either *in natura* or processed, is considered organic when it is acquired in an organic production system or originated from a sustainable extractive process and not harmful to the local ecosystem. Organic products to be commercialized need to be certified by bodies accredited in the Ministry of Agriculture, however, products produced by family farmers who participate in social control organizations registered in the Ministry of Agriculture, Livestock and Supply (MAPA) and sell exclusively and directly to consumers, are exempted from certification (MAPA, 2019).

Another way of adding value is agriculture industrialization, which is an activity that transforms raw material originated from small farms into food. The product of this activity, at first, was intended for family consumption, and, over time, and changes in consumption habits, the products of family agriculture industrialization began to be sold in the market assisting in the income of producers (STRATE; CONTERATO, 2018). This, as observed in the selected articles, is one of the ways of adding value most used by rural producers, and it is common to produce pasta, cookies, juices, pulps, among others.

The agroecological system can be carried out in several ways, and it is known that one of them is the Agroforestry practice, which is a simple process of food production. It is known that the forest has been a space where new production practices are introduced, but the use of forest spaces does not allow for their transformation into a monoculture space, thus, the result is a mosaic of managed forests and Agroforestry systems. Hence, it can be noticed that the agroecological system is a positive and relatively easy way to be adopted by rural family farmers, and thus, add value to their products (STEENBOCK et al., 2013).

The ways of adding value least used by family farming are the Seal of origin, Branding and Organic Certification, being mentioned only in one paper each. The organic certification process was little discussed in only one article,

and despite being an interesting way of adding value, it is one of the most complex practices to be applied, since it is necessary to have an accurate follow-up on all points of the value chain. It is necessary to ensure the quality and health of products, which also involves the process of transportation, storage and delivery to the final consumer, as it is necessary to ensure that there is no contamination (SILVA; OLIVEIRA, 2013).

The seal of origin and origin certification are the types of Geographical Indication (GI). The GI emerged gradually when producers and consumers began noticing distinctive qualities in some products that were from certain places and understood that this had the ability to be a competitive advantage. Thus, they began to designate these products with the geographical name of their place of origin. However, obtaining the Geographical Indication is not so easy, there must be mechanisms that can protect this intangible value that adds value to the product (VIEIRA et al., 2014). It can be noticed that to obtain the Geographical Indication, it is necessary that the rural family producer is engaged in the search for a differential in their product, follow the legislation and apply for registration and issuance of certificate with the INPI - National Institute of Intellectual Property.

As indicated, another way to add value is branding. It is known that the brand plays a crucial role in the perception of products by consumers (GARCIA et al., 2011). According to Kotler and Armstrong (2015), a brand is a name, sign, term, symbol or design that serves to identify the product. However, brands are more than unassuming symbols, they are strong links in the relationship between company and consumers. For this link to happen, it is necessary to manage the brand very well, using a set of practices and techniques aimed at building it stronger, known as branding. In order this to happen in family farming, it is necessary that the producer has knowledge or help with management, a factor that is an obstacle to the use of this element of value addition.

Another point identified is that the biggest driver for adding value to products from family farming is the financial factor. It is understood that family farmers seek ways to improve their income and consequently their quality of life.

However, more than that, the improvement in family farmers' income is a way to stimulate their perpetuation in the property, as pointed out by Ferreira (2017, p. 01), when stating that "[...] agriculture industrialization acts as a strategic role in strengthening family farming, especially in local development".

In order to better understand the selected articles, the most frequently cited words were checked. These are shown in the word cloud shown in figure 3.

Fig.3: Word cloud

Source: Prepared by the authors, 2019.

NVIVO® was used to find the 50 most frequent words, with at least 5 letters, in the selected articles. As a grouping, exact correspondences and derived words were chosen. Prepositions, pronouns, and adverbs were excluded from the graph.

As it can be observed, the most cited words are family and its derivatives 574 times, followed by agricultural, farmers and agriculture (524). It was already expected that there would be many citations of terms related to the researched theme. However, the words that most called attention were those related to added value: chain (172), consumer (163), agroindustry (152), local (150), organic (139), region (135), short (104), agroecology and agroextractivist (101), quality (89). It is worth noting that the number of citations encompasses the term and its derivatives as plural, foreign language terms. It is noticeable that the elements that add value, although they appear with less emphasis, if compared to the terms directly linked to the theme, appear many times.

IV. CONCLUSION

Based on the above, it is possible to realize that several variables of added value were discussed in the selected articles. However, there is still a range of variables that can be used so that rural family farmers can add value to their products and thus get a better return on the investment made in their land and their work.

Although the articles address 10 different ways of adding value, which are often combined together, there is the possibility to go beyond, through variables such as, a) Product handling, such as washing, peeling and chopping

the products, b) Standard packaging, which protects the product both for transport and sale, c) Defined market positioning, working a differentiation according to what is valued by the consumer, d) Service, such as specialized deliveries, and also e) Image, using a tag/label with the producer's brand/logo.

In addition, family farmers must consider the context in which they are inserted, as Bauman states, in a liquid society. A society that encompasses rapid changes, market uncertainties, lack of references, temporariness, insecurity, and even demands that are greater than the capacity or conditions they had to solve them.

Thus, family farmers need to be aware of what happens to their consumers, since what they produce and how they produce can influence the acceptance or not of their products in the market, which is made up of increasingly demanding people who live in this liquid context.

So, there is a gap between what has been researched so far and other ways of adding value in a liquid society, that is, a society that is in constant mutation.

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