

Technical assistance and verticalization of production in cooperative enterprise of family farmers

Assistência técnica e verticalização da produção em empreendimento cooperativo de agricultores familiares

Asistencia técnica y verticalización de la producción en empresa cooperativa de agricultores familiares

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Abstract

Technical Assistance is one of the bases for public policies to encourage production and reduce costs in family farming. Understanding this guided the action research carried out by teachers and students from IFMT, Campus Várzea Grande, MT, Brazil, together with a milk processing cooperative, COOPERGRANDE. The objective was to present the importance of public technical assistance for the verticalization of milk production, which could reduce the cooperative's transaction costs, by expanding ties between the cooperative and its members, strengthened by close relationships. The methodology used was action research and the results obtained demonstrated that technical assistance, as a public policy, offered by EMPAER, is deficient, mainly due to lack of government investment. It is concluded that the objective was partially achieved, because despite the trust established between the cooperative members and the team of teachers and students, there was an absence of local public authorities in the training and monitoring carried out by the interveners.

Keywords: Family agricultural cooperative; Transaction costs; Interpersonal conflicts; Trusts.

Resumo

A Assistência Técnica é uma das bases para políticas públicas de incentivo à produção e redução de custos da agricultura familiar. A compreensão disso norteou a pesquisa-ação realizada por professores e alunos do IFMT, Campus Várzea Grande, MT, Brasil, junto a uma cooperativa de processamento de leite, a COOPERGRANDE. O objetivo foi apresentar a importância da assistência técnica pública para a verticalização da produção de leite, o que poderia reduzir os custos de transação da cooperativa, por meio da ampliação dos laços entre a cooperativa e os cooperados, fortalecidos pelas relações de proximidade. A metodologia utilizada foi a pesquisa-ação e os resultados obtidos demonstraram que a assistência técnica, como política pública, ofertada pela EMPAER, é deficitária, principalmente por falta de investimentos governamentais. Conclui-se que o objetivo foi parcialmente alcançado, pois

apesar da confiança estabelecida entre os cooperados e a equipe de professores e estudantes, houve a ausência do poder público local nas capacitações e acompanhamentos realizados pelos interventores.

Palavras-chave: Cooperativa agrícola familiar; Custos de transação; Conflitos interpessoais; Confiança.

Resumen

La Asistencia Técnica es una de las bases de las políticas públicas para incentivar la producción y reducir costos en la agricultura familiar. Comprender esto guió la investigación-acción realizada por profesores y estudiantes del IFMT, Campus Várzea Grande, MT, Brasil, junto con una cooperativa procesadora de leche, COOPERGRANDE. El objetivo fue presentar la importancia de la asistencia técnica pública para la verticalización de la producción de leche, que podría reducir los costos de transacción de la cooperativa, al ampliar los vínculos entre la cooperativa y sus miembros, fortalecidos por relaciones estrechas. La metodología utilizada fue la investigación acción y los resultados obtenidos demostraron que la asistencia técnica, como política pública, que ofrece EMPAER, es deficiente, principalmente por falta de inversión gubernamental. Se concluye que el objetivo se logró parcialmente, pues a pesar de la confianza establecida entre los cooperativistas y el equipo de docentes y estudiantes, hubo ausencia de las autoridades públicas locales en la capacitación y seguimiento realizado por los intervinientes.

Palabras clave: Cooperativa agrícola familiar; Costos de transacción; Conflictos interpersonales; Confianza.

1. Introduction

In Brazil, one of the demands for the development of family agricultural follow-up is public and quality technical assistance, which enables sustainability in food production. This challenge mobilizes public managers at the municipal, state and federal levels, due to the importance of family agricultural production to ensure the food and nutritional security of the country, as well as its important socioeconomic contribution in the occupation of the family workforce.

The literature touts the importance of cooperative organizations, potentializing the sustainability of the family agricultural sector (Andrade & Alves, 2013, Minatel & Bonganha, 2015, Ramos et al., 2022), as a possibility to articulate the commercialization and verticalize the processing of production. Cooperatives have the possibility of favoring the appropriation, by the cooperative members, of social assets, who may be able to benefit, in a sustainable way, their associates. Since those who establish connections in each community, through joint work, can generate an environment of mutual trust that will act for collective benefit through the promotion of economies of scale, favoring all involved.

Cooperatives are presented, thus, as possibilities for family farming to reach competitive potential. However, it is known that the difficulty has worsened in the context of family farming organizations in recent years. This crisis happens worldwide and has been caused by a lack of perspective for those living in family agricultural production. The conflict occurs mainly due to the high costs to produce, considering the time, the physical strength used in production and the difficulty in hiring specialized technical assistance.

Aiming to contribute to this scenario a research team of the higher course technologist in public management of Instituto Federal de Mato Grosso, IFMT, Campus Várzea Grande, conducted action research in Agropecuária Várzea-grandense Agricultural Cooperative, COOPERGRANDE. This cooperative is a family agricultural development for milk processing. The action research carried out, assumes that public policies to support technical assistance is an essential element to contribute to the sustainability of collective groups of family agricultural producers.

The producers of the milk benefited at COOPERGRANDE distanced much of it, and many families settled in the settlement project, the cooperative's head office, did not have dairy cattle, which was related, among other factors, to the lack of technical assistance in the region. Aiming at possibilities for solving the detected problem, the researchers, together with the coordination of the project, through the action research methodology, built an action plan to support the verticalization of production through the insertion in the enterprise, as cooperatives, of milk producers living in the settlement project, or of surrounding communities, of the cooperative's office analyzed.

The hypothesis established was that the production, within the settlement, the union's home, or surrounding region, would be one of the actions that could reduce transaction costs, facilitating the establishment of contracts for the minimum

supply of raw materials, milk, in quantity and quality for processing. The Technical Assistance and Extension, ATER, in this context, configures as a possibility to contribute to the strengthening of the cooperative, through the organization of production, establishment of contracts and resolution of interpersonal conf

1.1 Transaction Cost Savings (ECT) in family agricultural cooperatives

Transaction Cost Savings, ECT, studies how partners in a transaction protect themselves from the uncertainties associated with economic trading relationships. The existence of transaction costs assumes of limited rationality and opportunistic behavior of economic agents. The existence of opportunism subjects the parties involved in a transaction to the unethical behavior of those involved, generating costs in the need for monitoring and renegotiation of contracts. Therefore, these costs are related to difficulties in having all the information about the negotiations carried out in the market, which impairs and charges the preparation and monitoring of contracts, generated by uncertainties in relations (Mera et al., 2018).

Understanding the transaction costs of an institution facilitates the adoption of a methodology for organizing economic enterprises, with a view to reducing these costs. The methodology adopted by a company can be essential in its survival, especially about family agricultural enterprises, which due to their decapitalization, need to reduce their costs as much as possible, to obtain leftovers that guarantee minimum income to their associated producers (Possani et al., 2018).

A pillar of the reduction of transactional costs, defended by the theory of transaction costs is the verticalization of production, which are based on the appropriation of profits by the firm. According to ECT theorists, one of the reasons why a company seeks verticalization, that is, the proper production of the necessary production supplies, rather than outsourcing the different stages of its production chain, is the search for the reduction of uncertainties (Queiroz et al., 2022).

According to Fontes, Albuquerque and Fontes (2019) the verticalization of production via family cooperative, creates the possibility of strengthening farmers. By establishing maximum proximity in this process, the cooperative does so, among other reasons, to reduce the risks of eventual supply failures or an abusive price increase, due to the fact that part of its production chain is under the responsibility of third parties far from its influence. Thus, in addition to reducing risk exposure, verticalization also confers the opportunity to increase the profitability of the cooperative, allowing greater leftovers for its members.

The production verticalization, defended here, assumes that all the raw material, necessary for processing in the cooperative, is provided exclusively by the cooperative members, being these residents of the settlement the cooperative's head office and/or in the vicinity of it. This factor can facilitate transactions and avoid a drop in milk supply for dairy production, through the relationships created by proximity. The implementation of production between cooperative members and establishments of proximity relationships with suppliers of a cooperative, has as one of the dynamic technical assistances, because this can ensure dialogue between local actors, as well as the valorization of tacit knowledge, which can be enriched by technology, which allows producers to achieve good levels of productivity (Baiardi & Fernandes da Cunha Basto, 2021).

1.2 Cooperative, technical assistance and trust in the State of Mato Grosso

In recent years, due to the incentives of the federal and state governments, family farming in Mato Grosso has been taking a new conformation, being represented mainly by associations and cooperatives in settlements and or local communities of traditional farmers. This is an attempt to promote sustainable rural development, add value to family agricultural products and ensure food security for consumers (Ramos, 2022). Despite government efforts, there is a great difficulty for cooperatives to maintain regular production, thus compromising an effective continuity in their operation (Craco et al., 2014).

For Freitas, Freitas and Santos Macedo (2016) cooperation is the first step in an institutional arrangement. According to the authors, cooperation is the relationship between the actors involved in a common activity, and the institutionalization of

this cooperation generates the cooperative. Biscaro, Moraes Hernandez and Luzio dos Santos (2023) defined cooperatives as institutional arrangements, whose main objective is to disseminate the principles of cooperativism.

The principles of cooperativism govern on the way of distribution of the benefits generated by cooperatives, as well as on the ownership and control of this way of undertaking. According to Santos and Carvalho (2015), the modern principles of cooperativism were established in 1995, through the International Cooperative Alliance. These internationally accepted principles can be listed in free access and voluntary participation; control, organization and democratic management; economic participation of its associates; autonomy and independence; education, training and information; cooperation between cooperatives and commitment to the community.

Cooperatives emerge in the economic system as a possibility of survival of family agricultural enterprises, enabling gains in scale through the organization of producers. Thus, cooperatives are a form of defense of external competition, in particular, of large agricultural property. However, cooperatives face several challenges in resource management, which affects the efficiencies of these institutions in the productive system (Oliveira & Bertolini, 2022).

Family agricultural dairy cattle, in the state of Mato Grosso, still does not require investments to improve production and access areas for the disposal of these products (Oliveira Júnior et al., 2016). Although it has been diagnosed by studies conducted by public bodies, such as Federação da Agricultura e Pecuária de Mato Grosso [Famato]; Serviço Nacional de Aprendizagem Rural de Mato Grosso [Senar-MT], Serviço Nacional de Aprendizagem do Cooperativismo [SESCOOP] (2011), that in 2010 and 2011, there was a higher concentration of milk production in the State.

Many dairy farmers have organized themselves in Cooperative, aiming at greater possibilities of subsistence, since the structure for milk processing is linked to an oligo sonic market structure, that is, with few buyers and many sellers of the product in natura. Thus, the formation of the milk price is influenced by the industry, which puts the producer in a position of greater difficulty in relation to the value of the product (Breitenbach et al., 2017).

Milk production, through family farming in the Midwest region, has a comparative advantage over other agricultural economic activities. This may explain the importance of this sector in the local economy, as pointed out by Oliveira Júnior et al. (2016).

Technical Assistance and Rural Extension [ATER] in Mato Grosso is defined by Law 12,188 of 2010. This definition, in Article 5, establishes that ATER is "the service of non-formal education, of a continuous nature, in rural areas, which promotes processes of management, production, processing and commercialization of agricultural and non-agricultural activities and services, including agro extractive, forestry and artisanal activities" (BRASIL, 2010). The ATER service in Mato Grosso is provided by Empresa Mato-Grossense de Pesquisa, Assistência e Extensão Rural - EMPAER/MT, which is linked to the Secretaria de Estado de Agricultura Familiar [SEAF].

In family farming, the trust of the assisted public has prominence in the extensionist action, which enables greater cooperation and participation of this, thus ensuring positive results (Froelich, 2019). Putnam (1996) argues that trust can act in the dissolution of potential conflicts, inhibiting opportunistic behavior. According to Fukuyama (2001), trust is the lubricant that drives a group or organization to function more efficiently. In each group, when there are expectations of reliable and honest behavior, members of that group will eventually trust each other. For Costa (2004), the construction of trust is related to the ability of individuals to relate, recognizing in the other, skills, skills, knowledge and habits.

For the above, public policy plays a fundamental role in ensuring technical assistance and training for the good development of family agricultural properties and consequently cooperatives organized by this segment.

2. Methodology

Action research was the methodology used in the development of this study in COOPERGRANDE. According to

Thiollent (2022), action research can be defined as participant research, which is characterized by being continuous, including the project to be developed through a concrete action carried out with the authors of the field researched, and the monitoring and evaluation of the practice adopted during the research is also implemented.

This research can still be defined as exploratory and qualitative. It is exploratory because it sought the knowledge of the facts that generate the costs of transactions within the cooperative. The research is still considered qualitative because it is part of the view of the analyzed subjects. A bibliographic survey of the themes considered relevant to the subject addressed was also carried out. The bibliographic research was used to seek reasoned information, articles and academic works, to know the facts that contributed about the subject explored.

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The approach with the cooperative, by the research team, was made, in the year 2018, in the periods of August to December. When then, the initial diagnosis was constructed, with the members, coordination team and 15 associates (fifteen) residents of Projeto de Assentamento Nossa Senhora Aparecida (Sadia I). Soon after, the planning of the action to be carried out was made. In the periods from February to May 2019, the planned action was developed and in the periods of June and July, the evaluation and transcription.

The researchers approached the project to be researched, through monthly visits, from July to December 2018, seeking interaction on the local reality, productive and organizational process, seeking to establish close relationships with the cooperative members, seeking to win the trust of these and the cooperative's management group.

At the end of this period, the intervention was proposed, an approximation with the public technical assistance company, EMPAER, analyzing possibilities of verticalization of milk production within the settlement and/or surrounding region. The implementation of the intervention, monitoring and evaluation action was developed in the first half of 2019.

For data analysis, it was used to analyze bibliographic content through the literature, comparing it with the facts that occurred in the cooperative during the action research process. The analysis respected the ethical standards of research, in the sense that the confidentiality of the participants in the interviews was maintained.

3. Results

COOPERGRANDE, the focus of this study, is, therefore, an agro-industrial cooperative that benefits milk, cheese and yogurt and is located at BR 163/364, kilometer 468, in the Settlement project Santa Terezinha, better known as Sadia I, name of the farm that gave rise to the settlement project. This settlement, located in the rural area of the municipality of Varzea Grande, is 27km from its headquarters.

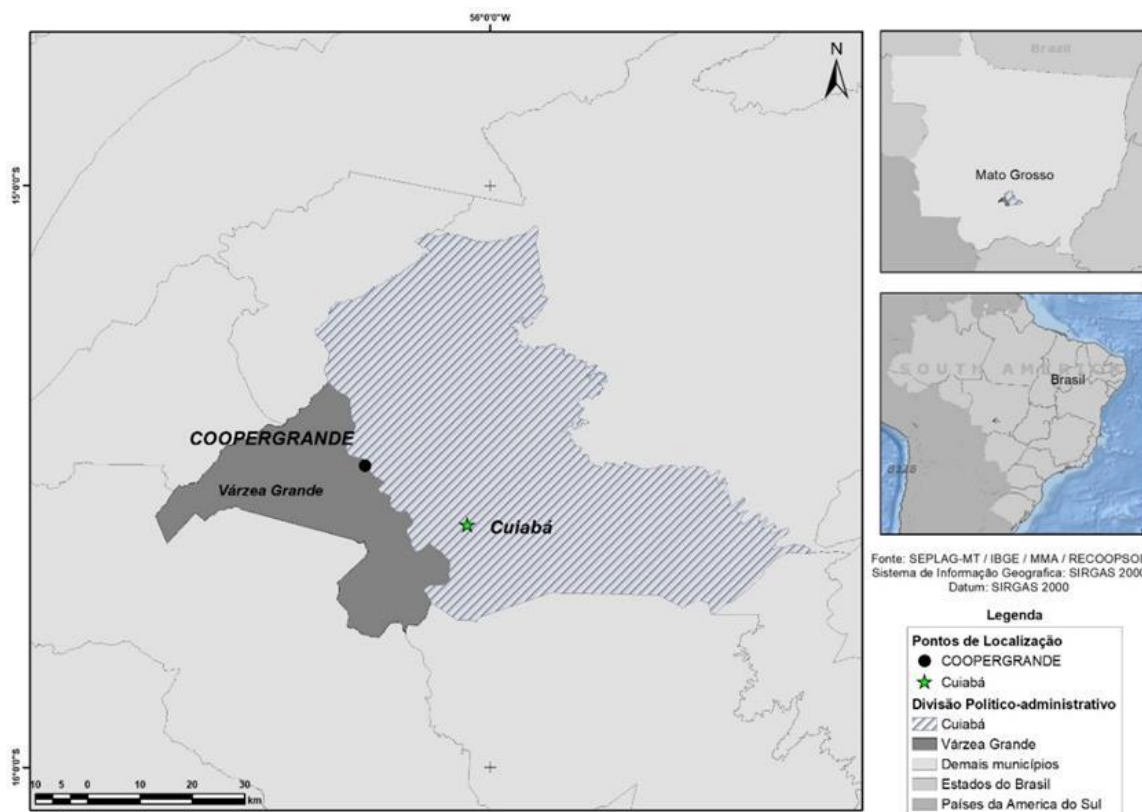
COOPERGRANDE is an important form of social organization in the Sadia I settlement project. At the beginning of the research, the cooperative had been working with a few members, to meet the demands of the markets it attended: municipal schools of Cuiabá and Varzea Grande.

According to the initial diagnosis, made in COOPERGRANDE, the difficulty of this was detected, in the acquisition of raw material, milk, for processing. It was verified, in the union's home settlement, that no family produced milk, because the existing cattle were beef. It was evaluated, with the coordination team, that the verticalization of production in the settlement or surrounding regions could be conquered through strategies of production planning and establishment of cooperation between the cooperative and the residents, which could contribute with a greater amount of raw material, for an

implementation of the product to be benefited by dairy.

Varzea Grande is a twin town of Cuiabá, capital of Mato Grosso, a state that is in the Midwest region of Brazil (Figure 1). The cooperative, in the phase of approaching the research team, intended its production for school meals, this production being dairy drinks and mozzarella, products that had been signed in a contract with the municipality, through the PNAE. According to information obtained from the cooperative's coordination, the institutional contract, carried out with municipal and state schools, exceeded one year, due to the small quantity of processed products, which were not enough to fulfill what was established in the contract, this was caused by deficiency in the raw material, that is, the little milk production existing on site.

Figure 1 - Agricultural Cooperative *Várzea-grandense*, COOPERGRANDE.



Source: Barros, J. (2021).

According to an interview with the coordinator of the cooperative, the same, to continue serving the few markets, essentially the institutional ones, sought the raw material, milk, at a distance of 150 km from its head office, because the residents of the cooperative's home settlement were not dedicated to dairy cattle and the milk producers living nearby, did not supply the product for processing in COOPERGRANDE, since they had lost confidence in the management of the enterprise.

The coordinator of the cooperative narrated that initially, the settlers of the Sadia I settlement, the head of COOPERGRANDE, had accessed resources, to start productive activities, of the National Program for Strengthening Family Agriculture, PRONAF. With this resource, the producers had acquired dairy cattle, because they already had the dairy construction project before the release of the resource. This cooperative planned, organized itself and founded COOPERGRANDE, in the expectation of family own subsistence from the possession of the land, improving the gains through the processing of production, milk.

The delay in the construction and legalization of dairy was longer than the settlers expected, and this time was about

nine years, between the beginning of the settlement in 2006 and the beginning of dairy activities by the cooperative in 2015. Many were the mishaps faced by the settlers in this period, especially the lack of market for the milk produced, leading the majority to give up the endeavor. Thus, when the activity in the dairy began, the families of the settlement had already sold the dairy cattle, many acquired beef cattle and others, less decapitalized, aiming at family support, went to seek work in the city, even continuing with the lot in the settlement.

The research team aimed to intervene in the situation. Among the proposals for intervention promoted with the coordination of the cooperative, it arose to seek with EMPAER, the possibility of training and information on means of financing and monitoring of producers, in order to motivate the verticalization of milk production in the cooperative's home settlement or in neighboring communities.

The importance of contacting EMPAER was established from the understanding that for the verticalization of production, a primary tool was technical assistance, because it was verified, in a local analysis, that the settlers had difficulty in resuming milk production due to lack of access to credit for structuring the property. There was also mistrust in the continuity of the cooperative's work. The existence of this mistrust was related to the rupture of the ties, between settlers and the managers of the cooperative, during the process of construction and structuring of the dairy, by the delay and other mishaps that affected and caused difficulties to producers to flow production, and conciliation actions were necessary to return to confidence.

The research team sought, through interviews with the EMPAER technical team, Varzea Grande sector, to know the activities developed by these, being informed of the work done with local farmers. According to the technicians, a work schedule was prepared monthly, together with the producers, by the team of the research and extension company. The technicians interviewed claimed to prioritize traditional farmers, settled and cooperated, in this order, in order to train these rural producers for better development of production within cooperatives.

The methodology of technical assistance and rural extension (ATER) used to provide this service to family farmers were visit to property, organizational meetings (with association and or cooperative), technical lectures, demonstration of cultivation method among others.

Interviews were conducted with EMPAER technicians, who reported the actions already developed in the region, these being the peasant (area of land cultivated with grasses with high production potential). Furthermore, according to the information gathered with the technicians, training had been carried out with zoo technicians, who taught the settlers in the region how they should make a planning on the area destined for production. They had also granted training on how producers could produce a good pasture and how to store the grass for drought, because, according to the technicians, the main training was in the need for investment to produce a good milk to be marketed and to undo the local culture from simply "buy the cow and drop into the pasture".

Also, according to EMPAER technicians, the company had acted on soil analysis of local settlements, to inform the producers of the necessary corrections for the development of the pasture, and the demonstration of method for collecting this analysis was carried out. After performing this action, according to the technicians, only one seated person took a sample for the analysis. It was also informed, by these EMPAER professionals, that the settlers did not care about the need presented by the technical team, the analysis of the land, that by these producers, do not have the habit of planning and especially financial resources, therefore, did not know what to develop in their properties.

After conducting the research with EMPAER, the research team took this information to COOPERGRANDE's members. A training moment was performed in the cooperative, with the presence of 14 (fourteen) IFMT students, 09 (nine) cooperative and 12 (twelve) residents of the cooperative's head office. However, during the explanation process, the members held a debate, clarifying that EMPAER did not provide, according to them, any technical assistance service in the locality, that

the cooperative members and other residents of the cooperative's surroundings had sought the institution on several occasions, but were not met in their claims.

Therefore, the research team evaluated the need for another approach with EMPAER, through a strategy to mediate a dialogue between the two groups, EMPAER and cooperative members. The research team emphasized, for both EMPAER and cooperative, the importance of technical assistance to improve COOPERGRANDE's performance, that is, to reduce transaction costs by increasing the production of the raw material necessary for the production process of the cooperative in the vicinity of COOPERGRANDE, as proposed in the objective of the work.

The action research team returned to EMPAER's base to find alternatives to mediate the dialogue of this institution with the residents of COOPERGRANDE's settlement base. At the time, it was obtained information that, despite the technical assistance provided in the region, EMPAER did not follow, specifically, the residents of the settlement based in the cooperative.

The technicians, in the new approach of the research team, reported that the technical assistance in the settlement of COOPERGRANDE's head office was defined at the beginning of the settlement, when the PRONAF was elaborated. The settlers of this street chose a private company to prepare the financing projects and provide technical assistance. The company chosen was rc (technical assistance planning advisory) in the municipality of Campo Verde, Goiás. Thus, RC carried out the project, receiving a percentage of PRONAF resources as a form of payment for the work provided.

The technical assistance contract was three years, a period in which the company granted all the support and productive assistance to producers, such as plantation and adequate cultivation of the soil, training in the production area and infrastructure necessary for the milk production process, among others. At the end of the contract in 2009, the company withdrew from the site, because the producers, decapitalized, with no alternative to drain the production, in view of the difficulties of construction of the dairy, could not renew the technical assistance contract with their own resources.

It was evident that the residents of the settlement, headquarters of COOPERGRANDE, did not have technical assistance from public agencies, but that this assistance was provided by a private company that elaborated the initial projects of PRONAF and withdrew from the site, leaving them, since then unassisted. Thus, since the period, these settled producers have not been able to leverage development potentials on the site, being one of the factors for this difficulty, the absence of technical assistance.

It was not possible to detect the reason for the option of the residents of this settlement, by a private company instead of the public company EMPAER, however, it is noted that in Mato Grosso, EMPAER, is increasingly scrapped by lack of resources from the government, lack of vehicles to transport technicians to the producer, there is no technical training of contract workers, the structures are precarious among others. In Brazil, the difficulties of financial resources for ATER have increased at country level, mainly due to the current conjuncture, in which the ideology of the minimum state is established, where the government has made available resources for the implementation of public policies for the development of segments such as that of family farmers.

In view of the above, it is evident that, although technical assistance was diagnosed as important to contribute to the increase in local production and, thus, contribute to the reduction of the transaction costs of the cooperative focus of the research, this was nonexistent.

Through the awareness of EMPAER technicians, concrete alternatives were sought with the company to solve the problem of lack of milk production in COOPERGRANDE's headquarters settlement, although the company was not involved in the initial process of financing and technical monitoring of the settlement. The technicians joined the discussions and in the local investigations, it was found that this problem could be partially solved with the delivery of the raw material by cooperative residents of the Nossa Senhora Aparecida Settlement (Sadia III), which is 40 km from COOPERGRANDE's head

office.

The present research team was informed, in the interview with EMPAER technicians, that the relations between the cooperative and the group of cooperative members of the Sadia III settlement, who were also cooperative members of COOPERGRANDE, had been broken by a financial conflict, a debt of the cooperative, not settled in the past, to these cooperative settlers. This fact was related to a ban suffered by the cooperative in 2016, by the health surveillance, due to irregularities of the Federal Inspection Seal - SIF. The interdiction occurred due to lack of adequacy of the cooperative according to the requirements of the federal inspection control, this at the beginning of the operation of the dairy. This fact, closing the dairy, was the generator of the relationship of mistrust, on the part of the residents of the settlement of the cooperative and the surrounding area, among these the cooperative residents of Sadia III, in the management of COOPERGRANDE.

According to information from EMPAER technicians, they had tried to intervene in the conflict between cooperative and cooperative residents of Sadia III, because the company provided technical assistance to the settlers of this settlement. EMPAER's technical staff had held meetings between the two groups, but without success, which may be related to the absence of bonds of trust between the cooperative members, residents of COOPERGRANDE's home settlement and EMPAER technicians.

The IFMT researchers, in view of this information, assumed to carry out a new intervention action, aiming at the resolution of the conflict. The research team contacted both groups, cooperative and settled Sadia III, aiming to make a survey of the provisions for dialogue, detecting strong possibilities for this. Thus, from March 18 to April 29, 2019, five meetings were held between the two groups, with conciliation as a proposal. The research team mediated dialogues between the 03 (three) representatives of COOPERGRANDE's board and 05 (five) representatives of the members of the Sadia III settlement, presenting the economic and financial gains, as well as all social contribution that came from the cooperation between the two, managing to minimize the existing conflict. Thus, at a meeting held on May 29, 2019, the groups gave themselves a vote of confidence and sealed an agreement to work together again.

EMPAER technicians followed the entire conciliation process, mediated by IFMT researchers, since the proposal of the action research is also related to the possibility of expanding the ties between the two groups, EMPAER and settlers from the cooperative's home settlement.

After the conciliation of the members of Sadia I and Sadia III, a COOPERGRANDE meeting was held on June 8, 2019. The announcement of the assembly was published in the Official journal; therefore, all public companies knew the news, however, it was not verified the presence of neither EMPAER nor the Secretaria de Agricultura Familiar - SEAF at the event. This assembly took place within the cooperative with the presence of co-workers; non-cooperative, residents of the settlement, professor and students of IFMT, who participated as guests, having the right to voice, a special service that demonstrated the level of trust established between the group of researchers of the IFMT and the cooperative members.

In this assembly, the new coordination team of the cooperative was reported, the actions to be taken by the cooperative, to pay off its debts through escalation, that is, realization of monthly payments with leftovers, according to the entry and exit of the products. It was presented the project of opening a own store in the city of Varzea Grande, which could facilitate the direct sale of the products. It was possible to realize that these perspectives raised the esteem of the participants and can certainly contribute to restoring trust between the cooperative members and the local society.

In the assembly, the decrease in the distance in the acquisition of raw material for processing milk was also presented as a positive aspect of the transactions between the cooperative and the cooperative members of Sadia III, which was acquired 150 km from the cooperative's head office and with conciliation is obtained 40 km from it. The coordination of the cooperative also cast the amount of raw material to be benefited in dairy, which, but doubled, because before the intervention it was 600

liters of milk per day, going, after the intervention, to 1700 liters per day. These factors were presented as the potential to generate lower costs in the transactions, mainly because the producers of Sadia III were still cooperative.

4. Discussion

COOPERGRANDE, like the other cooperatives and any other organization, needed to draw alliances and make strategic adjustments that would allow it to effectively control its resources, an important factor for its stability. Having the basic input of its vertical production among cooperative members and in the vicinity of its head office was a strategy assumed by the cooperative in obtaining the necessary resources for its survival. For the establishment of intra organizational bonds, negotiations and concessions were necessary, even with losses related to the freedom of the management team. To maintain the achievements, technical support will be needed, either in conflict mediation or in productive training.

Rodríguez, Cruz and Guelbert, (2019) also discussed the importance of providing technological knowledge to enable the socioeconomic progress of a community of farmers. According to the authors, structuring a center of technical consulting and qualification that contributes to the process of verticalization of production is an essential process for the implementation of family agro industries.

The neglect of the family agricultural segment, as presented in the report of the results, is a challenge already evidenced by the literature, because according to Castro (2015) despite the importance of family farming in Brazil this is being neglected, especially about quality technical assistance. Also, according to the author, the technical assistance provided by EMPAER is entirely dependent on resources from state governments and, the amount of this resource, depends on the level of capitalization of the state.

In 2002, when describing the deficiency of technical assistance, Garagorry, Quirino and Sousa (2002) report the regional differences in the allocation of this assistance, which accompany the typical dividing line of Brazil. According to the author, technical assistance, by family agricultural establishments in Brazil, was organized as well: 50.0% of establishments in the South of the country used technical assistance, and in the Southeast this amount was 41.5%, in the Midwest 32.0%, against 14.6% in the Northeast and 14.5% in the North. Feitosa (2004) and Oliveira (2023) also reported the increasing precariousness of technical assistance in Brazil, despite all the implementation of agrarian reform projects in recent decades.

Ferro and Vechi (2014) corroborate the difficulties faced by Brazilian producers regarding technical assistance, reporting that in the State of Mato Grosso, despite the strategic importance of agriculture, including dairy, producers suffer to achieve the minimum scale of production, as it does not have quality technical assistance. Among other factors, the difficulties faced by producers, the author highlights the dependence on technical training offered by public institutions. Also according to the authors, many private companies, which assume the Service of ATER in the state, do not carry out these technical assistance actions in the settlements, claiming precariousness on the roads of rural settlements of Mato Grosso.

In previous studies (Silva et al., 2014) the difficulty of cooperation between family farmers in the Midwest region has been identified. The State of Mato Grosso, mainly in the territory of the lowland of Cuiaba, where the municipality of Varzea Grande, headquarters of COOPERGRANDE, is located, does not differ from the region, the individualistic culture of working the land prevails. In cooperatives, interpersonal conflicts are provoked, among others, by the absence of reciprocity, trust, the act of cooperating. Technical assistance in this context would be essential to mediate existing conflicts and contribute to the establishments of the norms, a role that, in the present research, was played by the team of researchers of the IFMT.

In the COOPERGRANDE Assembly, it was also discussed about access to credit lines, such as PRONAF and others, aiming at investments. It was also discussed the allocation of leftovers for the acquisition of machines to increase production, however, nothing was listed on technical assistance. The absence of EMPAER representatives, as well as the absence of this

theme, technical assistance, in the Assembly, showed that this factor still did not occupy the concerns of the cooperative management group.

Thus, the research considers that it has partially succeeded in the proposed intervention, because it achieved, through mediation between the milk-producing group of the Sadia III settlement and the Sadia I Settlement Cooperative, greater proximity in the acquisition of the basic input for COOPERGRANDE production and a greater amount of this amount to be benefited.

The expectation was that the greater proximity to suppliers would allow the establishment of bonds, between these the reliable ones. However, about the verticalization of production in the cooperative's home settlement, more elements would be needed, such as production financing and mainly technical assistance.

Despite the intervention, there was no support of the groups involved on the importance of technical assistance to improve production on site. Despite all the training on the importance of technical assistance, aiming at minimizing the costs of long-term transactions, with the verticalization of production in the settlement, this did not have the desired effect, listed as necessary other interventions and new partners, for the state's support and local farmers' organizations the proposal.

5. Conclusion

The intervention of researchers from IFMT, Campus Varzea Grande at COOPERGRANDE generated positive results, even partially, creating the possibility for the verticalization of production among cooperative members through the reestablished relationships between the cooperative members of Sadia III and COOPERGRANDE. This verticalization allowed the increase of the raw material to be benefited, being cooperative and not individual producers, geographically distant and without ties of belonging with the cooperative, as occurred before the intervention. This close relationship has the potential to reduce the uncertainty in the amount of product to be benefited in dairy, thus allowing greater security in the fulfillment of contracts assumed by COOPERGRANDE.

Therefore, it is concluded that it is necessary, technical assistance policies and rural extension, of systematic and continuous monitoring, to contribute to agro-industrial production through the reduction of the uncertainty of access to productive production, dissolution of conflicts and mediation of dialogue between family agricultural producers. This process may allow a minimization of the costs, among these those of transactions, contributing to the subsistence of these enterprises and, consequently, with rural development.

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