

Organic rice in the settlements of Rio Grande do Sul

A broken artifact¹

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Abstract – In the settlements around Porto Alegre, we found the largest area planted with organic rice in Brazil. By directly involving dozens, and indirectly, hundreds of families, has, therefore, economic importance. The production and income of these organic rice producers were analyzed for the year 2017, based on the production systems diagnosis. There was a high amplitude in agricultural cost and incomes. In 31% of the samples the incomes were negative, in 50% were positive and lower than one thousand reais per hectare, and the remainder was higher than one thousand reais per hectare. At the same time, a simplified ethnography was carried out inspired by Olivier de Sardan's ECRIS methodology. Knowing that the harvest of 2018 greatly extended the economic crisis, it was evaluated agronomic and sociological aspects that influence the crisis. From it and the lack of technical assistance, infrastructure, credit and market access, we sought to understand the tensions and practical norms at stake on the relationship with two cooperatives and one association acting in that place, with repercussions on rice production.

Keywords: anthropology of development, organic farming, production systems.

Arroz orgânico nos assentamentos do Rio Grande do Sul: um artefato quebrado

Resumo – Nos assentamentos do entorno de Porto Alegre, encontramos a maior área plantada com arroz orgânico do Brasil. Envolvendo, diretamente, dezenas e, indiretamente, centenas de famílias, ela tem, portanto, importância econômica. Produção e renda foram analisadas para 2017, com base em diagnóstico de sistemas de produção. Encontrou-se alta amplitude nos custos de produção e nas rendas agrícolas: em 31 % das amostras, as rendas foram negativas; em 50%, foram positivas e menores do que R\$ 1.000,00 por hectare; o restante foi superior a R\$ 1.000,00 por hectare. Paralelamente, efetuou-se uma etnografia simplificada inspirada na metodologia ECRIS, de Olivier de Sardan. Sabendo-se que a safra de 2018 ampliou em muito a crise econômica, avaliaram-se aspectos agrônomicas e sociológicos que influenciam a crise. A partir dela e das carências com assistência técnica, infraestrutura, crédito e acesso a mercado, procurou-se compreender as tensões e normas práticas em jogo na relação com duas cooperativas e uma associação, atuantes no local, com reflexos na produção do arroz.

Palavras-chave: antropologia do desenvolvimento, agricultura orgânica, sistemas de produção.

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Introduction

This article evaluates the organic rice experience in the settlements surrounding Porto Alegre, State of Rio Grande do Sul's capital, Brazil. The research was concentrated in the Viamão settlement (municipality with the same name), although we also collected data in Santa Rita de Cássia II, Capela (both in Nova Santa Rita city), Jânio Guedes (in São Jerônimo city) and Lagoa do Junco (in Tapes city) settlements. All cities near Porto Alegre.

With 376 beneficiary families, Viamão is the largest and, possibly, the most complex settlement of the state. We have already had the opportunity to study it with different approaches, discussing clientelism, the irrigation district, quasi-groups, mediation and technological adoption (Mello, 2016, 2017, 2019). Created in 1998, by National Institute of Colonization and Agrarian Reform (Incra), because of its insertion in an Environmental Protection Area (EPA) and the presence of a wildlife refuge, it was found to be well postulated that families should practice exclusively organic farming, a fact that took ten years to be effected, at least, for the majority. Having one of the largest artificial water bodies in the region, along with an immense and costly irrigation structure, the settlement allows the cultivation of large expanses of irrigated rice.

Until the mid-2000, the area was planted with little rule and under many conflicts, both between the settlers and the surroundings (other rice fields, water consumers, environmentalists, conflicts that tend to occupy certain arenas such as the Gravataí River Basin Committee, the Board of the EPA and of the refuge), as well as among the settlers themselves. Pursuing a solution for them, Incra implanted with the settlers an irrigation district. Thus, from 2008 onwards, the water became managed by an association of the settlers, the "sons of Sepé settlers association" (AAFISE), occurring until today and, from a technical standpoint, with increasing professionalization (Zang, 2017), but with internal questioning. After ten years of frustrated attempts, even if it

presents challenges, it can be said that its management was consolidated in the settlement.

In parallel, many situations were undeveloped, two of which were especially relevant. The first is that the settlement received extraordinary resources that totaled millions of reais, which were managed and applied by the same association, mainly in the floodplains infrastructure. The second referred to the resumption of the mandatory organic cultivation, by the influence of the Federal Public Prosecutor's Office and Incra itself. As most producers cultivated in a conventional way, there were protests that were reflected in the boycott of the district. The water rate was not paid nor the areas agreed for planting were respected. The solution found by Incra, at the time, was to expel dozens of settlers (under the pretense of leasing, external work and misconduct) and confiscate their production, in the case of the 2008/2009 crop, initiating a judicial battle.

Thereafter, and, also, due to late demarcation, there was a reordering of the settlement, with new occupations of lots and implementation of the work guideline with organic rice and other crops. It is worth saying that farmers who could not or wanted to plant rice felt secondary. Despite some efforts to diversify public investments – such as in fruticulture, which was not successful –, there was little emphasis on alternatives to rice. In the dry areas, the houses and small crops were established, but most of the settlement is composed of floodplains areas, of which a fraction is used for rice, another for beef cattle, and a much smaller fraction, for other production lines. The usable fraction for rice was established as the irrigation perimeter and the maximum irrigable area per year is 1,600 hectares.

The first group of organic farmers in the settlement, from their leadership, catapulted by Incra (Mello, 2016), formed a cooperative, the COPERAV, and expanded the rice crop. From there, some settlers, with or without experience in the subject, began to also cultivate areas ranging from 10 to 100 hectares (maximum limit

established by the AAFISE). The regional cooperative of the Landless's Workers Movement (MST, the political organization who controls the settlements in Rio Grande do Sul), COOTAP, began to finance almost all the rice fields, receiving its production to industrialize (in structures provided by Incra) and commercialize, mainly, for governmental programs and, even, abroad. Payments are made in bags of rice.

The central cooperative of the MST, COCEARGS, coordinates the mandatory process of organic certification, being the representative of the swiss certifying of Ecological Market Institute (IMO). There are other smaller certifiers on site, for other crops. In any case, all work with the practice of solidary certification, where settlers from other settlements are responsible for a large part of this settlement inspection. The analysis considers that this is a relatively dense interweaving between these organizations, since they all live in the same shelter of the MST. Even in regional terms, we find the "managing group" of organic rice.

In recent decades, the "agroecological" idea was gradually occupying spaces in Brazilian society, especially in the Incra and colleges. In Rio Grande do Sul, one of its largest business cards is the organic rice, manifested in a set of cultivation techniques, endorsed by Incra (Produção..., 2015) and legitimized in a number of papers presented in scientific congresses of different areas, "Agroecology", Agroecosystems, geography, rural development, etc., in spite of the scarce agronomic confirmation of the techniques³.

Over the years, some training in organic rice has been carried out, but the learning was basically from farmer to farmer, with local technicians having a secondary role. More marginally, in Viamão settlement, was counted with the participation of the Brazilian Agricultural

Research Company (Embrapa), however, few settlers had access to it. Public resources (including access to Embrapa's technologies in the form of an acquired cultural capital) are monopolized by a small group of agents linked to the cooperatives and leaders of the MST. More than half of the Viamão rice farmers had not heard that the research institution would have acted in the settlement. Of those who knew, few were involved (Mello, 2019).

In 2018 – ten years after our first research in the settlement – evaluating the harvested rice in 2017 and the reports that, in the harvest, of 2018, the situation worsened, we found that an economic crisis was established in this production line. The theme is relevant to the extent that, in the 2016/2017 crop, it was counted with 30 direct producers cultivating 23 crops and, something like 150 families raising income indirectly, but whose values are sufficiently important in the composition of their total incomes. In the harvest now in preparation (2018/2019), we already have three withdrawals. In addition, it is observed the migration to the vegetable crop production (whose limits will not be addressed in this text), even among those that are still planting rice. Outside of Viamão, the largest researched producer, 250 hectares, gave up organic farming due to its low profitability.

The crisis and its effects on the indebtedness of producers – including, with families that earn income indirectly – is the gateway to explore various situations. One of them is the pursuit of understanding the reasons for it. Another aspect is the evaluation of the tensions found between the farmers and the cooperatives that finance them and dictate certain agronomic practices, some of which are questioned by those.

The current moment is especially serious in view of the bad harvests, the low price of rice

³ Serpantié (2017) scrutinize the diffusion of a certain technique of rice seedlings transplantation that was born in Madagascar and reached several countries, presenting an intriguing analogy with our case: the technique in question had not been tested and subjected to agronomic criticism, which did not prevent gaining the support of important international institutions and local government, among other reasons, thanks to the mobilizing power of expressions such as participatory development, fight against poverty and "agroecology". Sen et al. (2017), studying the same technique in India (one of the 50 countries, adding up to about 10 million farmers who had contact with it) also characterized it as a myth catapulted by ONG activism and governments and the World Bank support.

and the end of the technical assistance, which ceased to be paid in mid-2017. On the other hand, justice has, recently, determined that Incra draws up a plan of application of the confiscation resources of ten years ago, with estimated values in the order of 3 million reais. Soon, the local arena will host new disputes over these resources. In addition to the ongoing conflicts, it is worth considering the resentment of some families harmed in the confiscation and expulsion of relatives (the result of an old clash) and what is seen as the ill-spent of the extraordinary resources that the settlement had access years ago and even the current resources managed by the AAFISE.

After this brief presentation, we present the research methodology, together with the theoretical framework, the commented results and final comments.

Methodology and theoretical framework

The research was carried out in parallel to an evaluation of technological adoption based on the work developed by the Incra-Embrapa partnership. Both are inspired by the need to supply the scarcity of ex post analysis of development policies, whose consequence is the regular repetition of the same errors of action (Olivier de Sardan, 2015a). It was, then, an exploratory research.

In addition to the cooperatives and AAFISE leaders, the sampling focused on the rice farmers, and, in the Viamão settlement, information was collected from all but one. In other settlements, there was a random choice of six farmers, for exploratory and comparative purposes.

Data collection was carried out by a methodology of production systems diagnosis based on the Incra/FAO Agreement (Garcia Filho, 1998), adapted by the author and applied on a large scale in the settlements of Rio Grande do Sul and Bahia States (Mello, 2016). From it, we tabulate the indicators listed in Table 1.

The formulas are: a) Gross Production Value (GPV): (Quantities sold plus human consumption) x unit price. b) Total Cost (TC): Annual Depreciation plus disbursement. c) Provision of services in agricultural activities (P). d) Agricultural Income (AI): $VBP + P - CT$. e) Non-agricultural Income (NAI): remunerated non-agricultural activities. f) Other Tickets (OT): other sources, including gains from land income and retirement. g) Total Tickets (TT): $AI + NAI + OT$.

Based on the fact that the agronomic and economic problems of the rice farmers find interfaces with situations of another order, which relate to their relationship with cooperatives, associations, political organizations (in this case, the MST), with the bureaucracy and other agents (financial, religious, etc.), the analysis has been extended to consider some of these aspects. Thus, in the case of the Viamão settlement, the families were interviewed with inspiration in the ECRIS methodology (Enquête Collective Rapide d'Identification des conflits et des groupes Stratégiques, i.e., strategic groups and conflicts identification fast and collective investigation, acronym in French), by Olivier de Sardan (2011), conforming a mixed method, i.e. Quali-quantitative. Each interviewee was found at least twice, which allows a disruption and, albeit partial, important, of certain resistances present in a first encounter.

The methodology relied on a simplification, but it aimed to maintain the ability to understand the reality to intervene, considering its principles and fundamental notions: arena, conflict, strategy, interest. The method also aims to overcome the artificial contexts of the questionnaires and reach the private language, not self-censored (Olivier de Sardan, 2015a).

The ECRIS develops continuously and in a go and comes between individual and collective phases (the latter was not performed directly), unlike classical ethnographic research, which favors the individual research of long duration. And, also, the accelerated investigation methods, such as the rapid participatory diagnosis (DRP),

Table 1. Crop responsible scholarship, GPV/ha, TC/ha, productivity (bags 50 kg/ha), cost of fertilizer/ha, AI/ha and strategic group of rice crops in settlements in the surroundings of Porto Alegre, Harvest 2016/2017. All in reais, the Brazilian coin⁽¹⁾.

Sample	Org.	Scholarship	Settlement	CPV/ha	TC/ha	Productivity (bags/ha)	Fertilizer cost/ha	AI/ha	Estrategic group
1	S	2	Viamão	2,400	2,655	50	90	-255	C
2	S	2	Viamão	2,978	3,624	57.3	182	-646	C
3	S	4	Viamão	2,872	3,642	58.6	172	-770	C
4	S	2	Viamão	3,178	3,456	61	0	-278	C
5	S	2	Viamão	3,120	2,319	65	0	801	C
6	S	3	Viamão	3,079	2,074	65.5	0	1,005	C
7	S	2	Viamão	3,500	2,621	70	36	879	C
8	S	3	Viamão	3,631	2,840	75.6	255	791	C
9	S	4	Viamão	4,446	3,987	78	520	459	C
10	S	3	Viamão	4,032	2,963	84	32	1,069	A
11	S	4	Viamão	4,231	4,614	85.5	420	-383	B
12	S	3	Viamão	4,200	4,004	87.5	0	196	C
13	S	2	Viamão	4,840	4,681	88	430	159	B
14	S	2	Viamão	2,638	2,963	53.8	0	-325	C
15	S	2	Viamão	3,120	2,880	65	450	240	C
16	S	3	Viamão	2,350	2,218	50	0	132	A
17	S	2	Viamão	3,411	3,798	72.6	48	-387	C
18	S	2	Viamão	2,808	3,269	58.5	45.3	-461	C
19	S	3	Viamão	4,170	2,828	78.8	56.2	1,342	B
20	S	3	Viamão	3,513	3,374	66.3	209	139	B
21	S	2	Viamão	4,000	3,773.5	80	90	226.5	B
22	S	2	Viamão	2,913.3	3,207.3	63.3	166.7	-294	B
23	N	2	Capela	5,282	4,482	127.3	X	800	X
24	S	5	Jânio Guedes	4,997.7	3,876.3	92	375	1,121	X
25	S	3	Santa Rita de Cássia II	3,600	2,865.6	75	36	734	X
26	S	2	Lagoa do Junco	3,733	3,447	77.8	277.8	286	X
27	N	2	Lagoa do Junco	6,574	3,564	168.6	X	3,010	X
28	N	2	Lagoa do Junco	5,877	5,432	133.6	X	445	X

⁽¹⁾ In april 2017, at the harvest, one dolar was 3.17 reais.

commonly done in Brazil, which privilege the short-term collective investigation.

It is about summarily identify the main local conflicts, in order to be able to predetermine within an arena the strategic groups (i.e. propose provisional strategic groups for the following collective research), regrouping categories of actors that share the same global relationship with these conflicts. Since the action of the Brazilian rural extension is very related to actions and projects of local development (rural, regional, territorial, etc.), the preliminary investigation will reveal, for example, the existence of conflicts for public resources. Such groups may include state bureaucracy and professional communities, enabling a cross-sectional analysis of the projects (Mello, 2017, p.111, our translation).

Such situations are prevalent in development projects but, in Brazil, little is worth a problematizing look (disengaged⁴, therefore) for the tensions that occur in the local arenas and in the mediation space. Thus, it was decided to consider the proposition of Olivier de Sardan (2009) towards an anthropology of governance, while a strand of the anthropology of development, which favors the analysis of the different ways that public goods and services are delivered to users. In our case, the settlers and their local interfaces, that is, in the meeting space between those who deliver (public servants, development agents) and others who enjoy such goods.

Our theoretical option contrasts with different marxist approaches, which privilege state theories to the detriment of empirical analysis; with the neoliberal approach, which, in a different way, ends up relying on stereotypes and categories too broad; and finally, with the Foucaultian approach⁵, whose focus on the disciplinary aspect of the state obscures its role as

a deliverer of goods and services (Bierschenk & Olivier de Sardan, 2014). In the anthropology of development field, it also distances itself from the post-structuralist strand and from those more normative, replacing an “ideological populism” (which romanticizes the local populations) by a “methodological populism”, which aims to investigate the strategies of social actors without positioning themselves on their value (Carneiro, 2012).

As for the goods and services in dispute (not all public, we must clarify), in our concrete case we have the production resources (seeds, fertilizers, machinery work, transportation etc.), which emanate from the cooperatives; further the land and water, which are disputed in the context of the settlement and the AAFISE, with Incra’s mediation. Of course, considering the disputes does not mean to neglect the cooperation processes among farmers, but, rather, to realize that they are not ubiquitous. In addition, some intricacies of the certification, also controlled by the cooperatives, and which constitute a kind of symbolic resources, crucial to the economic survival of the producers, were prospected.

There are resources that, at other times, had more centrality, as another symbolic resource – in this case, related to the possibility of being expelled by Incra – in addition to the credit resources, the technical assistance and the infrastructure, all provided by Incra. However, these resources, the materials, especially, have become scarce. Thus, the research required attention to the cooperatives and the AAFISE in their relationship with the rice farmers. Not only the formal/written relationship, but mainly the everyday practices, which are based on a kind of unwritten repertoire of action and that we will call practical norms (Olivier de Sardan, 2009). Although not explicit, they regulate the behavior of the agents in the interaction

⁴ There are those who understand engagement as a methodological necessity for anthropology and those who advocate on the contrary. One can think of an anthropology for development and, on the other, one that studies development. Hagberg & Ouattara (2012) face such a division as unfortunate. Our “engagement” will be limited to the choice of the study theme, without taking advantage of internal conflicts, avoiding the practical instrumentalization of the social sciences, as Coradini suggests (2018a).

⁵ Foucault served as a theoretical inspiration for the post-colonial thinkers to problematize the development as a discursive field and to realize that their strategies implied in domination processes that made it possible to construct the categories Third World and Underdevelopment (Escobar, 1995).

with the official and social norms (both explicit), providing them with a margin of manoeuvre. It is necessary to clarify the gap between what is said and what is actually done on the ground. How is the distribution of goods and services in dispute in fact carried out?

The combination of different norms with certain professional cultures and specific forms of authority, conforms an institutional mechanism (a device) for the delivery of goods and services, a mode of governance. It is possible to think about different modes of governance, which, once combined, generate specific effects to be analyzed in each case (Olivier de Sardan, 2014).

Leaving aside the sindical discourse⁶, cooperativism is, of course, a necessity placed on small producers, especially to overcome market imperfections (Alves et al., 2019). However, a critical analysis of the tensions at stake between the leaders/technical staff of cooperatives and associates allows us to understand more broadly the situations that unfold before the organic rice crisis in the settlements. This requires the researcher to take seriously what Olivier de Sardan (2015a) calls epistemic equality: a rigorous effort in the sense of not privileging, neglects or, even, devaluing any group. It is not our role as a researcher, nor as an Incra server.

This adaptation of the ECRIS opens the way for understanding the horizontal and vertical relations in the dispute for resources. Dispute that materializes in strategic groups acting in certain arenas informed by official norms (for example, the rules imposed by Incra, environmental organs, the AAFISE regiment etc.), social (respect for the older, the other property) and practical norms. In this case, it is not about residual, criminal, anarchic or chaotic norms. But, yes, of tacit and shared procedures that allow agents to deal with everyday issues, often circumvent the explicit norms⁷.

The practical norms are incorporated into the *habitus*, within the meaning of Bourdieu, although, in this case, different from that used by this author, we should consider the interweaving of the norms and not only the dominant norm incorporated. The approach adopted, being plural, differs from the culturalist view, while the consideration of the non-explicit norms removes the institutionalist view. Finally, we do not deny the economic calculation or reduce the human agency to the *homo oeconomicus* expedient, as in the human capital theories (Coradini, 2018b). Thus,

Agency is the implementation of a capacity for selection from a limited series of (formally and informally) regulated options located in the open space between official norms, social norms and practical norms. It is the job of the researcher to describe these options in context (Olivier de Sardan, 2015b, p.21).

The practical norms observance, as a generic expression, is the intermediate step of the analysis: it is important to deepen to obtain terrain classifications that explain the behaviors. I mean, it is avoided to fall prematurely in a specific model of behavior, even because it is not unusual for a combination of these models, such as neopatrimonialism, clientelism, professional cultures, etc.

In our case, the use of this exploratory concept helps us to understand the relationship between the settlers and the organizations in question. So, even if, officially or discursively, all the settlers have the same possibilities, in practice, we find differentiated treatments. And, of each specific combination of official, social and practical norms, one can think of different modes of governance in the context of rural development projects, a real space of play and transformation.

⁶ Brazil is a prodigal in the generation of a multitude of normative works on “agroecology”, agrarian reform, cooperativism and other similar themes, of which we will not occupy ourselves.

⁷ Many examples could be cited in sports, transit, donation, bribes for public agents, absenteeism, etc. We are bound by one referring to Islamized societies: the social obligation to give alms is impossible to fulfill all the time, so it develops a series of strategies to dribble it. Such situations are not idiosyncratic, they are regulated by practical norms (Olivier de Sardan, 2015b).

Results and discussion

In the Viamão settlement, we applied 22 questionnaires that represent almost all of the 23 crops harvested in 2017. Only one farmer didn't want to be interviewee. In addition, six interviews were conducted, representing six crops in the Santa Rita de Cássia II (1), Jânio Guedes (1), Capela (1) and Lagoa do Junco (3) settlements, all municipalities in the vicinity of Porto Alegre. There are cases in which production is joint, so there was the involvement of 29 farmers in Viamão and, in the remainder, five farmers and one production cooperative, with 10 families. In part of the cases, there was payment of indirect income from the land. There is not only one modality, but in all cases, it tends to be eufemized in several terminologies. In the settlements, "partnership"; In Incra, "farming projects"; in the engaged literature, "families involved", "cooperation".

The first finding, of general order, is about the continuity of the indirect income of the land, existing from the beginning of the settlement, with a certain variation, as in the COPERAV. Moreover, this expedient is largely released in large part of the Rio Grande do Sul and other states settlements. It does not seem correct to take this configuration as indicative of "cooperation and organization process of the public involved" (Zang, 2017, p.25), but to verify our first practical norm in full operation. Well, being an expensive and demanding high-tech production, and in view of, we can already call historical, Incra's difficulty in supporting that, in addition to the difficulties of the terrain and the supply of non-agricultural work nearby, reasonable to consider that great part of the farmers opt to earn indirect incomes from their lands instead of putting them personally to produce. And more generally, the countless examples of frustrated collectivism in the Brazilian agrarian reform, in addition to the evident consolidation of a capitalist sociability in the field (Navarro, 2016), inform the (few) options of the agents in this issue.

However, at least two differences should be recorded: the small presence of intermediar-

ies, comparing with a decade before reality, as the farmers began to negotiate directly with those responsible for the lots. Secondly, in relation to the amounts paid, the income currently revolves around ten rice bags per hectare, a value considerably lower than that which was paid ten years before, when the rice was conventionally produced, which ranged from 20 to 30 bags per hectare. In this sense, there was an evident impoverishment of those responsible for land, estimated, there, in 150 families. The presence of land income modalities, after two syndications that resulted in punishments to the settlers attested more than the resilience of this practical norm, with economic motivation, in view of public policies efforts to contain it: the same was metamorphosed in the official norm, the "farming projects".

The economic results are listed in Table 1. In this, only one crop in the Capela settlement and two in the Lagoa do Junco settlement are conventional. The remaining 25 are organic. In these cases, it was not identified anything significantly different, as to the cultivation method as to the general relationship with the cooperatives. By way of analysis, we can define three groups of Agricultural Income (AI) per hectare: those who had negative income (9 crops), those with income less than one thousand reais per hectare (14 crops), and with income greater than one thousand reais per hectare (5 crops). The range of AI per hectare is R\$ - 770.00/ha to R\$ 3,010.00/ha.

The value of a thousand reais per hectare is based on an income of approximately thirteen annual minimum wages for 12 hectares (an average lot in the metropolitan region). That is, a referential value. As there is something like two human work units per lot, this situation still demands the income of other sources, such as vegetable crop, cheese, agroindustry etc. Of course, this is a theoretical situation. In practice, crops have an average area of 60 hectares (involving more lots), ranging from 9 to 250 hectares.

As we can see, the number of households with income above one thousand reais per hectare is small. On the other hand, the high range of

costs and profitability demonstrate the different productive strategies, variations of the terrain and, also, the result of a series of non-agronomic actions that are released hand to complement the productive strategies. The following we discuss some of the issues encountered.

Firstly, the declared scholarship by those responsible for the crops (2 represents literate, 3, complete elementary School, 4, complete high School and 5, complete higher education) does not correlate with the agricultural income, something that is verified visually. In fact, the profitability, in being very related to the correct technological adoption, demand, among other factors, a much more specific cultural capital contribution, not captured by a generic indicator as quoted.

Secondly, the organic system promoted a forced conversion of farmers who did not initially have the knowledge to do so. Some trainings were made by the MST and its cooperatives, in addition to Embrapa's actions (in this case, secondary). Some of these capacitations had a "biodynamic" bias, given that the state's great reference in organic rice is a "biodynamic" farmer that produces and industrializes several types of rice, packing in vacuum and selling in demanding markets to very high prices.

The support of Embrapa was very limited and, through scholarship holders, concentrated on testing (but without monitoring due and with scarce systematization of results) animal traction, rizipisciculture, Peking duck, buffalos and "biodynamic" techniques. Examples of these are the preparations with rock powders and manure that are placed inside horns, buried and then diluted in water to "enlarge the luminosity in the leaves" or debase more quickly the crop residues, among other techniques. It is cited what would be a property of silicon in the formation of more erect leaf structures and, consequently, with greater photosynthetic possibilities (something controversial), besides greater defenses for the penetration of fungi (although all this lacks better scientific research), but the "biodynamic" agriculture argumentation is based on astrological principles:

The Biodynamic Agriculture is an ecological-based production system that integrates with other types of production systems existing in the science of Agroecology. Biodynamic agriculture has its own characteristics. Among its prominent elements are the use of biodynamic preparations (using principles of homeopathy) and the accompaniment of the astronomical calendar (beyond the phases of the moon, uses other stars as signs to govern the elements of the Earth (Betemps, 2015, our translation).

Ethnography revealed that most farmers had contact with these technologies, manufactured and tested, but opted for not adopting because they did not see tangible results and, when they saw it, it was alleged that biodynamic preparations demanded a lot of work, which would have made impossible to use it. About other technologies, there was also no adoption, except for modalities of water management, drying of the seed in the open air to germinate and the Peking duck. In this case, even having given up (on account of robberies, escapes and predators), some farmers raised the possibility of resumption, but nothing conclusive (Mello, 2019).

Embrapa's actions, at least in the researched areas, did not use a proper publication: *Cultivo de arroz irrigado orgânico no Rio Grande do Sul* (Mattos & Martins, 2009) presents important research information, although insufficient to account for the complex and dynamic reality of organic rice. Greater accumulation of knowledge is needed, nothing different from the need today for the entire production chain of organic products (Buainain & Batalha, 2007).

In addition to this kind of technological insecurity (or higher risk) that is still inherent to organic crops, we must also consider low productivities. While fine long rice had an average yield of 160 bags of 50 kg per hectare in the harvest of 2017, in Rio Grande do Sul, our sample revealed a mean (weighted) productivity of 71.5 bags per hectare for organic rice, i.e., 44.7% of the average State. The conventional rice, in our sample, had an average yield of 152.9 bags per hectare.

According to practically all interviewees, the grains productivity and quality fell in the harvest 2018, while prices declined. The nominal price, for May 2017, was R\$ 37.7 for 50 kg bag of fine long rice in shell T1 + T2. The Viamão settlers received values for the organic rice whose fashion was R\$ 48.00 the bag. Thus, for comparison purposes, organic rice was remunerated around 27% more. However, according to the interviewees, this price fell, in 2018, for something around R\$ 40.00/bag and the difference for conventional rice reached 15%.

In this situation, profitability can only be maintained with the search for markets that practice higher prices, which tends to be something difficult to achieve, and/or strategies that reduce costs and increase productivity. Two of the 28 crops surveyed produced, in addition to the long white rice, other types of rice: cateto, red and black. Despite the attractiveness of the higher prices, the demand is very low. Also, the calculation of the income of these crops, for comparison with the rest of the crops, was considered that the production was all sold, a fact that has not yet occurred, after a year and a half. Thus, in the same way that special modalities of rice, the organic, in general, conforms a market niche and, like every niche, small demand is one of its characteristics.

Cooperatives provide seeds, fertilizers, diesel oil, freight, drying, packing and certification, so that the farmers pay in clean and dry rice bags. After this, they must bear the values spent, among them, the income of the land (10 bags per hectare in general) and the cost of water (in Viamão, six or ten bags per hectare, depending on whether there is pumping or not).

The average production costs (TC) were R\$ 3.279,00/ha for organic and R\$ 4.492,7/ha for the conventional ones. Finally, the average profitability (IA) was R\$ 231,2/ha and R\$ 1.418,3/ha respectively. This latest information objectively reveals the organic rice crisis, because, for a reasonable proportion of farmers, the higher prices (which were flattened in the next crop) were not sufficient to account for the low yields,

given that the costs are not so disparate. This is because, despite not using chemical fertilizers and pesticides, the organic rice is cultivated in pre-germinated system: the seeds, previously germinated, are released in flooded frames and grow before, avoiding the competition of the invaders. This system presents high cost with machinery and organic fertilization, besides having to rely on organic certification, whose cost is one bag per hectare. Although the averages reveal an unfavorable situation, there are still examples of success within the organic rhiziculture, from the point of view of agricultural income (Table 1), indicating possibilities.

Thus, the analyzed data reveal situations opposite to that stated in Vignolo et al. (2011), because the productivities are not growing and there is a significant indebtedness of organic rice producers. Although the economic difficulties of conventional rice farming are not disregarded, the comparison of the costs of production of organic and conventional rice proposed in the aforementioned publication is unreasonable, and for two reasons: first, they are methodologies very different. The used by the Instituto Rio-grandense do Arroz (Irga) to calculate the cost of conventional rice presents much more items, thus generating higher values. Secondly, the calculation made by this institution presents objectives that go far beyond pure scientific research.

The pre-germinated system faces environmental challenges, because there is intense loss of soil, decreasing the fertility of the tracts and polluting the rivers. In the case of organic cultivation, it tends to be necessary for the control of red rice, thus its abandonment depends on the development of systems that control this invasive plant in other ways.

The legislation regulating organic farming does not allow the use of soluble fertilizers, except for two potassium formulations. Thus, farmers become potential consumers of organic fertilizers. The most used in the area are poultry litter-based fertilizers or turkey manure granules. It occurs that, as the process as a whole must be certified, COOTAP has supplied very expensive fertilizers,

compared to a normal poultry bed bought in the market. At this point, there is a phenomenon that is inverse to the expected, because cooperativism aims to decrease input prices.

Moreover, in many cases, there was a lack of soil analysis and/or technical recommendations, so that the quantities of fertilizer to be applied were made by a poorly grounded decision. One interviewee revealed: "There is no point in analyzing it, because it says that the land requires urea and fertilizer". In general, the quantities were low. Another interviewee complained that it would be much more advantageous for them to acquire an uncertified poultry bed because it would cost a third of the price, not seeing the advantage in the IMO.

Table 1 also presents the cost per hectare with organic fertilizer. As expected, there is a tendency for greater investments to result in higher yields. However, the profitability was very variable, having been high in situations of low or no investment with fertilizer and, in more than half of the cases, negative or low, when it was more expensive in this item. The analysis is limited (and, by hypothesis, the correlations are not narrower) because we count on only one agricultural year and the non-evaluation of soil fertility (the floodplain areas of the Viamão settlement have five types of soils and the areas in question have, obviously, differentiated historical management). Of any sort, the trend verified allows to recognize as reasonable the questioning of the settlers regarding the viability of using organic fertilizer, thanks to its high cost.

We found no record of major problems related to diseases, insects and molluscs (these, in isolated cases). This may be due to the relative ignorance of the symptomatology, but, in general, it can be said that the lack of nutrients for rice is the main cause of low yields, which has caused a deadlock and an almost generalized complain by the use of chemical fertilizers. Strictly speaking, most farmers ask to use urea, understanding it as something other than chemical fertilizer, known as NPK, although it is the main source of N in this type of formulation. A

simple calculation shows that the use of urea can increase productivity with a much lower expense than the use of organic fertilizer. The same reasoning can be done for phosphorus (P) and potassium (K). Thus, it is identified, here, a central issue of this crisis that is the difficulty in enough fertilizing the lands.

The fact that they request urea does not mean disappreciation for organic rice. On the contrary, almost all respondents understand how positive they do not deal with pesticides. "Organic is life quality" is a phrase repeated by several (although most of them do not consume organic rice due to the high cost). What they question, therefore, is what is seen as an exaggeration of legislation. It is recommended in organic agriculture fallow for soil recovery. Not uncommon, this becomes unfeasible in local conditions. On the other hand, the use of winter green fertilization, which, according to Scivittaro (2009), can supply all the need for nitrogen, is difficult to implement due to the need to have a good drainage in winter. But, it is certainly something to explore, as well as the use of the aquatic plant, genus *Azolla*, whose symbiosis with bacteria promotes biological fixation of N.

The Peking ducks represent a concrete possibility to solve problems of snails, weeds, insects and (secondarily) soil fertilization, and additional rents can be obtained with the sale of eggs and animals for slaughter (there is a purchasing company in Santa Catarina State). However, its creation demands intense care in Viamão, with, in the case of unattention, significant losses. In the first experiment in the area, many ducks fled or were hunted by hawks and robbed. Remained the teaching that the creator should reside in the floodplain and grazing the animals daily for months on end, which is seen as impracticable for most of the farmers. Thus, a way to circumvent these problems would be to specialize some producers in the creation of these ducks, then selling the "service" of cleaning and fertilization of the tracts to the rice fields.

As for the use of rock dust, there are reports of a possible control of the snail (a reasonable

problem for some) through it. In any case, its use, in addition to other biofertilizing preparations, such as fertilizer and soil conditioner lacks experimentation. We collect reports of complaints about what would have been a “prohibition” of the use of these products in the Viamão settlement, because they would not be certified. Being the certification made in a “participatory” way, only with audits of the IMO, in practice, is COCEARGS who has control of the process, as suggested a settler, “IMO is a franchise, who certifies even is COCEARGS”. For her it would be the “fox taking care of the chicken coop”. In this theme, it is clear the cooperatives amalgam, because some interviewees understand that who certifies is the COOTAP.

It seems that there is a market dispute for inputs, with COOTAP being better positioned, as it finances farmers, exercising an objective domain. The lack of land title, as well as the combing of the economic situation of most of the settlers places them in a disadvantageous position to raise credit in other squares, which ends up being oligopolized by COOTAP and the COPERAV, this, on a much smaller scale. A rice farmer, complaining of COOTAP’s yoke, boasts about being able to capture money from outside and thus gaining greater independence internally. It was almost unanimous the claim for seeds provided by COOTAP in at least one agricultural year, having been appointed with one of the reasons for low productivity due to its low quality.

The different rentabilities are tributary, therefore, of different productive resources managements. There are cases of very high depreciations, i.e., lack of scale, excess equipment, etc. Water management, especially its timing, is also a factor of great influence on productivity. This, in turn, is only partly in the technical governability of the farmer, being dependent on the the district’s water management as a whole.

In short, from the agronomic point of view, the cultivation of organic rice in the settlements surrounding Porto Alegre presents important challenges. Apparently, the twenty

years of technical assistance funded by Incra and (more punctually, in the case of Viamão) by the AAFISE, in addition to Embrapa’s interventions, were insufficient to handle this problem. “Lack of specialized technical staff”, reports a rice farmer. “I know more than the technicians” reports another. It is symptomatic that, when asked by those who learned how to plant organic rice, most of the rice farmers cite other farmers and, not, the technicians.

Intertwined with the intrinsically agronomic and economic issues, we have situations of another order. To evaluate the profitability, we must consider the dispute for the best areas (more fertile, with easier management, better drained, etc.) and the best or worst relationship with the cooperatives in order to receive inputs and have their crop collected at the right time or not. Finally, the water need in the right time also presents injunctions in the relationship with the district.

We have seen that the relationship with COOTAP is tense, there are a number of mistrust and reclaims, among them, as to what is seen as high, the interest charged. “COOTAP is capitalist” says an interviewee; “The guys are dreadful” says another. “She left her wish” comments a third. “She finishes killing the producer”, “usurp the others” says a fourth. On the other hand, even in situations where producers, almost in a grateful way, report the support of COOTAP, the situation appears as that something personalized.

There is one element, however, that may not be well regarded by farmers. COOTAP moves large resources and ark with a considerable risk, so that there is a inescapable “capitalist” dimension in its positions. Certainly, for this reason, for the farmers in debt, sought to renegotiate, so as to put them in cultivation, even in other settlements. There are several cases found. With this, acting as intermediaries, in addition to trying to recover the resources due, still puts in production areas that are stopped in the region and promotes indirect income to the lots beneficiaries.

As for water, a theme that, in principle, would be only in the reach of AAFISE and Incra, grumblers a settler: "COOTAP covers", when talking about what it saw as a differentiated access to water by some producers. More than one respondent complained of the AAFISE direction for being more of the "side of them [COOTAP] than ours [settlers]". Some interviewees understand that it is the same "clique" who manages the entities and makes decisions about supply of water and inputs.

In fact, the relationship with the cooperatives and the association is the result of an interweaving of norms, where the economic calculation cohabits with situations of another order, such as the greater or lesser insertion in networks of political-ideological loyalty.

An emblematic case of another practical norm incorporated in the relationship with COOTAP is the payment of a bag of rice per lot planted for the MST. As another expression of this tangle – and the asymmetric relationship it generates –, when questioned about the values of quota-capital, funrural (a Brazilian tax), and interest, as well as the counterpart of COOTAP in the freight of rice, many farmers did not know for sure (the same lack of knowledge was detected among the COPERAV cooperates). For them, there would be individualized charges.

In addition, there are complaints about how the impurities and the moisture content of the harvested grains are discounted. Some rice farmers felt injured and, claiming this, sold part of their production to third parties, breaking a pact with COOTAP that, according to some interviewees, generated reprisal. Regardless of whether or not there is a single correct procedure, its non-clarification is a tension factor.

Similarly, as for the COPERAV. One interviewee summarized: "the COPERAV's ideas are good, but I do not agree with how to apply". They "had the monopoly of information," reports another rice farmer. Another complete: "Has an owner, the [more than 100, according to him] partners do not whistle anything". The

detachment of this cooperative is punctuated by one more interviewee: "We do not eat in the same dish". Another states that "the COPERAV is the same thing", comparing with what it sees as an exploration of COOTAP. In the case of COPERAV, a more well-founded family logic is recognized by the interviewees, who do not measure words in opposing such logic to civic dictates. In counterpoint, one participant, close to the ruling group, ponders: they make assembly, open inscription, but no one is adventurous... then they keep taking".

The water is paid directly to AAFISE, which manages the irrigation district. This supply depends on the work of technicians and "canaleiros", which control the floodgates and channels. There are reports that the district favors some farmers to the detriment of others. This would have occurred especially in the harvest of 2017/2018 when there were the operating licence and the granting of water use suspension, followed by a judicial order to lock the irrigation, due to the dumping of "dirty water" (muddy water from pre-germinated preparation) in the Gravataí River. Some rice farmers would have received water in the correct amount and time, while others did not receive or even received muddy water, which would have harmed their crops.

Regardless of the truthfulness or not of this privileged situation, the district, managed by the AAFISE president with a board of irrigants support, works as an arena, discussing and disputing the themes related to water and where it approves and legitimizes the "farming projects", in the limit, the possibility or not of obtaining land and water. An opportunity to prospect the practical norms.

Some interviews report that nocturnal use of water, payment of bribe and other actions seen as unethical, locally designated "goats". Practical norms are laid hand to account for the extreme need to receive (or drain) water at the right time, which are relatively tolerated (an interviewee claims that they have defined fines for this, but have never implemented), but maintains

a dispute situation and tension. I mean, small deviations of water (sometimes of resources) can be tolerated as long as they do not promote major disorders, such as that occurring in the last harvest, which generated extreme consequences, with the water being tranked due to turbidity in the discard water.

The regimentation of a group of settlers to enlarge the planted area is made on the basis of personal relationships (alliances by friendship, *compadrio*, family relations, etc.), commercial agreements (there are cases of higher or early payments) and technical convenience: the areas should be close, so if any settler has lot near a formed group, there may be no other option than to join this group.

In addition, there are more fertile, more systematized land (demanding fewer machinery costs), those whose topography demands water pumping, generating higher costs, and, ultimately, lots that are in debt to the district (one should be paid out if you want to plant again). Thus, they also dispute the best areas for planting, in a game of bargains and negotiations between rice farmers and between them and those responsible for the land, with the participation of AAFISE and Incra. The result of these disputes appears imperfectly in the “farming projects”: we found that the groups, there, are not exactly those that occur in the field.

The need to avoid the water turbidity that reaches the Gravataí River, due to the pre-germinated system, became imperative to the settlement. Thus, the AAFISE is implementing a “dirty water” reuse project within the settlement and, for that, defined an exclusion zone. In this proposition, many dozens of lots (of these, 26 cultivated in the 2016/2017 crop) would be prevented from cultivate rice in the 2018/2019 crop. Within this large group, a portion of something like 80 hectares would be the decanting area of “dirty water”, that is, in this case, they would be prevented from any production. This generated

concern both for those who planted there, as well as for the beneficiaries of the lots affected.

The initial proposal was presented at a seminar in april 2018 (AAFISE, 2018), and, from then on, the discussions were unrolled. There is a concern of the AAFISE in basing its propositions on technical criteria related to topography and terrain possibilities, specially, to the presence of irrigation canals and drains. On the other hand, we found some rice farmers defending that the area was imposed by COOTAP and AAFISE on account of that field generates low yields and higher risk, and the farmers who planted there were owed to the cooperative for a long time. Others claim that there would be no need for such a large exclusion area. The way it was done, it hurts a lot of people. In addition, according to certain rice farmers, it would have benefited the governing body of this entity: “The district has begun to unwalk”, “do not value its associates”, “here one pulls the rug on the other”. We followed the discussion to the hot, because nothing has been written yet regarding the lots situation in the exclusion zone.

The AAFISE efforts so that the settlement is not again earned by expanding the turbidity of the Gravataí River involves, in addition to constructions and the exclusion zone definition, the collective planning of rice planting (its escalation) and the monitoring of the water quality⁸ (AAFISE, 2018). It seeks to prevent the system from having to deal with excessive disposal in a short period of time. The process obliges farmers to enter into an agreement and act in the opposite direction as foreseen by Hardin (1968), in the Tragedy of the Commons, where the successful individual strategy redasses the collective failure, in this case, the prohibition of planting.

For this and other reasons, the presence of associations such as the AAFISE (there are others on site, for specific purposes), is vital for the collective resources management, such as the irrigation system. Similarly, the two aforementioned cooperatives allow farmers to have, theoretically,

⁸ Water analysis is being carried out with support from the Federal Institute of Rio Grande do Sul, in Viamão.

gains in scale in the purchase of inputs and the sale of products. In addition, it can be counted on the opening of new markets, the provision of bureaucratic services and negotiation with institutions (in organic certification, for example), the storage, industrialization of products and the financing of production and, until, personal credit. Indeed, there is the potential to diminish the market imperfections (Alves et al., 2019). But, as an almost inevitable consequence, cooperatives are obliged to work with economic assessments and the level of charges is broadened, at the limit, with the exclusion of debtors.

For farmers to gather the fruits of all these services, at least two situations need to be equable: the adoption of technologies that allow for productivity and superior quality of products, and the functioning of the content and with equality of the benefits delivery mechanisms. Let's see each one of them.

The technological dimension is central to agriculture, but in the case of organic production, it becomes even more salient, due to the greater legal and technical difficulties to produce in this way. We argue (Mello, 2019) that the presence of Embrapa was not sufficient for farmers professionalization, nor 20 years of technical assistance in the area. And the challenge for cooperatives is even greater, because governmental support only tends to diminish there, and the problem of titration (which expands the possibilities of credit) has not yet been solved.

The relative absence of Incra is not new. Notably, the actions that demand negotiation with the beneficiaries, laborious by nature, have always been, to a greater or lesser degree, attributed by bureaucracy to the MST brokerage (which, in turn, generated a scarce understanding of what is unfolding within settlements, whose consequence is the action errors repetition). Thus, more than ever, the cooperatives occupy the center of the distribution actions of goods and services.

The second situation concerns the lack of professionalization in cooperativism/associativ-

ism, as has warned the Central Bank of Brazil (Ventura, 2009; Bacen, 2015). The question is approached, here, by the way of the anthropology of development, evaluating the interweaving of internal logics to these cooperatives and their concrete effects on smallholder farmers, as suggested in Mello (2017). Thus, it is worth considering that the professionalism expected, in fact, is the result of a technicist action logic – which places emphasis on the need for technology and efficiency – and, another, universalist, which presses for impersonality. It occurs that these logics are not hegemonic.

The interviews denoted that the tensions found are informed by a certain elitist bias, a fact that, after all, is not uncommon in the organizations that propose the solidary market (Bernstein & Oya, 2014). Ethnography revealed the continuity of a situation already observed ten years ago: the AAFISE works on the basis of elections with very little settlers participation, something pointed out by some interviewees as a generator of small representativeness leaderships.

The issue is recurrent in Brazilian credit cooperatives. In addition to the general insufficiency in governance, in 63% of them (in the most common modality, without delegation), the participation is up to 10% in the assemblies. There are deficiencies in succession policies, information asymmetries, deficit surveillance and – almost as a corollary – widespread absence of electoral disputes (Bacen, 2015). There is also a negative correlation between participation and the associates number, as well as between participation and economic performance plus the benefits offered by them, this on account of several factors. In any case, the less participation, the lower transparency in governance is observed (Bialoskorski Neto, 2007). Participation (and incentive to it) may occur formally, in assemblies, for example, in an impersonal logic, or through other logics, with a personalistic bias.

In the case of the COPERAV, it is perceived, strongly, a familiar logic, having been pointed by a large number of interviewees. Similarly, the AAFISE has an intense participation of the same

group of COPERAV and, on the other hand, in an intertwining with COOTAP, where this cooperative ends up having important ancestry about the AAFISE. After all, the three institutions are under the same political umbrella of the MST.

In the two cooperatives, personalistic logics, while a more generic expression, sometimes take part in the choice of those who are financed and in the individualized negotiations. It could be assumed the presence of other logics, such as the neopatrimonialist, the clientelist, etc., but our research was not sufficient for a denser description.

In any case, from the already found in the local arenas of this settlement, ten years earlier, where the patron-client conformations were present alongside brokerage processes (Mello, 2016), nowadays, there is a decrease in the intermediation in the income of the land (which was to be expected), where some small brokers converted to producers or changed branches.

In this new moment, access to public resources is more strongly mediated by cooperatives and, as this is an environment oriented by rural development projects, there are favorable conditions for the emergence of brokers, whose performance tends to be inextrinsically linked to the patron-client relationship (Bierschenck et al., 2002). These relationships are informed by logics that generate verticalized practices and a less supportive relationship between the associates, as the AAFISE document seems to see:

The relationship of the counselors to the district is dichotomized, that is, the counselors come to the district as a separate, distant service delivery entity. It is noted that most of the counselors do not feel part of the district, seeing the same only as an entity that distributes water and carries out the charge as well as does works in the irrigated perimeter (Zang, 2017, p.107, our translation).

The research allowed us to provide, albeit provisionally, three strategic groups: the one headed by the leaders of the COOTAP/AAFISE, another by the leaders of the COPERAV (also

with power in AAFISE), and a third, more diffuse and numerous group that it covers those losers from the incident ten years earlier and a contingent of rice farmers in a bad financial situation. As said, the resources arising from the seizure of rice have already become the major object of dispute between these groups.

Personalist logics conform loyalty groups, in the case of MST cooperatives, very much related to power nets and to a socialist and environmentalist ideology. These, in turn, are tributaries of a certain activist culture forged in the MST, including the inculcation of a deserving grammar *sui generis*, where the deserving (in the native language, the “companions”) are detached from the undeserving (the “bandits”), albeit intertwined with economic interest.

These configuration types tend to secularize the technical aspect itself, which often results, and the rice case demonstrates this, in productive difficulties, whose impacts differ, depending on the sector in which it focuses. In the case of organic gardens, for less professionalized ones, it works with high-value products and with relatively low costs and difficulty (for some crops), in addition to a facilitated market, in the case of settlements close to large urban centers, allowing reasonable profitability in comparison with other sectors. With respect to organic rice, the situation is different. The contribution of technology (in this case, also valid for fruits and certain vegetables) and the process organization are determinant for the farmers survival. The lack of these two elements to content, with the help of weather and market inconstances (valid for any agricultural production), has made something complex the repair of this true social artifact imposed by the bureaucracy.

Final comments

The crisis in organic rice, in the economic sense, allowed us to evaluate its agronomic reasons and its inter relationship with another order reasons. The farmer relationship with the three most influential settlement entities, two coopera-

tives and one association was problematized so that one could understand the local conflicts by land (and by the titration thereof), water and resources for production. Disputed by at least three strategic groups (it could be more detailed, but would require a much longer immersion), constitute a privileged space for the manifestation of logics of action competing with the technicist logic – increasingly present in the Brazilian field, pushed by the market forces – and the universalist, related to the formation principles of these entities.

The disputes in question are regulated by official, social and practical norms. These last ones, being hidden, should be unveiled by ethnographic research. Thus, the “farming projects” approved in the AAFISE and Incra, when they account for an official norm that limits the planted area, also regulate the income of the land, limiting an area for *each farmer* (for Incra, as the situation appears as a collective project, whatever the crop size). Another situation involving the AAFISE is the definition of an exclusion zone for the disposal of “dirty water”, which, even presenting a technical and impersonal discourse, harmed certain farmers, who saw it as a way to benefit others, that is, reporting a hidden personalist logic.

Still within the scope of the AAFISE/district, the expedients used to obtain the irrigation water in the quantity and the right time are not exhausted in meeting the rules of the district. A whole set of practical norms is laid hand to deal with the dispute for water: opening of the locks at night, water deviations for their crops, launching “dirty water” at an inappropriate time, among other situations, are reasonably tolerated practices, since not to be extrapolating, avoiding the use of official norms, such as the prediction of fines to transgressions.

On the other hand, the relationship with cooperatives is informed by other types of practical norms that impose an economic contribution to the political organization that controls them. But, even more readily observable, in this case, this is the least relevant practical norm, different

from those regulating the control of certification and other material means of production, industrialization and commercialization.

Tensions between cooperatives and settlers are regulated by certain norms, where personal relationships and political loyalty networks take part in the definition, for example, of who will have access to resources for production and whether or not this occurs at the moment necessary, especially regarding the sending of inputs and machinery. The social hierarchies, at the same time, cause and effect of this process, appear in the economic results, where the leaders of the strategic groups related to these organizations have some of the best agricultural incomes.

The crisis – and the way it deals with it – has imposed a reasonable debandment of planters for other production lines (whose discussion does not fit in this article) and a concentration of the rice production in those agents more well positioned in the arenas studied, as indicate the movements of 2018, where the planted area will decrease to less than 1200 ha, with fewer planters, according to the approved projects.

The present article attempted to demonstrate the need to understand the different modes of delivery of goods and services and their constraints in these microcosm that represent the settlements. In our view, they are important information for those responsible for dealing with development projects.

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