Transition to organic farming in Brazil: local matters

1. Introduction

This study focuses on local aspects of the transition to organic farming. The first contribution is to provide additional local knowledge, which is widely recognized due to regional and local specificities. Secondly, it contributes by bringing some results that can be described as infrequent in the scientific literature, mainly related to marketing issues.

In terms of organic agricultural production, Brazil is one of the most important countries in terms of area and growth, especially in the southern region. (Lourenço; Schneider, 2022). The State of Paraná holds the highest proportion relative to the total number of agricultural properties: 2.31% (7,056 properties). Globally, in 2020, organic production was present in 190 countries, covering 74.9 million hectares (4.1% more than one year earlier), involving 3.4 million producers and a market worth EUR 120 billion (Willer et al., 2022). This has led to the realization that it is no longer a niche market in some countries. Ferreira and Coelho (2017) indicate that the growth of organic consumption in Brazil is significantly higher than in developed markets, possibly due to baseline values as well as to increasing income and education levels.

Among several variables influencing the transition process, Rogé et al. (2017, apud Ume, 2023) did not observe a significant difference in productivity between organic and non-organic producers. Ferreira et al. (2020) point out (and cite) that several studies indicate an increase in profitability, where the decline in productivity is compensated by higher product values. Also, according to McBride et al. (2015), price premiums are important in explaining the organic product's potential profit. On the other hand, Partelli et al. (2006, apud Durso et al., 2018) found that the lack of price differentiation compared to conventional products and the decline in productivity are among the main challenges cited by producers. Although research results point in the same direction, they are not necessarily convergent and even depend on interactions between variables, as in Bang et al. (2024).

In this context, the objective of this study is to identify relevant aspects faced by producers during the transition to organic production. It is worthy because this process has regional characteristics, and knowledge about them can assist both new producers entering the transition process and policy makers.

2. Methodology

The study is a multi-case investigation, gathering information about organically certified properties in the Maringá region (State of Paraná's Northwestern Region, Brazil). The recent certification allowed for a more accurate collection of information when producers had a fresher memory of the transition process. In one municipality in the region where the study was carried out, seven producers were identified: five already certified at the start of the research and two in transition. However, only six were considered for production aspects (one of them was temporarily out of operation). One of the justifications is that the

adoption of organic systems varies based on the geographical and biophysical characteristics of each region (Singh et al., 2023).

The interviews were conducted in two rounds, using a previously tested instrument, with a one-year interval between each round, and the researcher participated in various group activities. This procedure was important because, in addition to observation, it allowed aspects identified individually in the first round to be explored in the second round (i.e., a new aspect was incorporated into the questionnaire in the second round to confirm whether it was a specific issue or one that concerned all the producers). Furthermore, this approach enabled the inclusion of producers who were in transition at the time of the initial round but had already obtained formal certification by the time of the second round.

3. Findings

Production destinations (final consumers or not) are mainly local (in the community) and include residents (direct sales or street markets), markets/supermarkets, restaurants, hospitals, and government programs. The route to these destinations can be direct or through a cooperative. The properties are mainly located in peri-urban areas. Inputs are purchased from municipalities in the region.

All seven properties were certified for organic production in 2023. The total area ranges from 1.0 to 3.6 ha (average 3.2 ha) while the certified area ranges from 0.1 to 1.0 ha which represents on average 20% of the overall area. Properties are dedicated mainly to leafy vegetables regarding organic production. There is only one in which fruits are the main organic crops.

Key findings include the following. First, in this case, most producers had previous experience regarding organic practices, despite having no formal prior certification. This can explain that in general productivity decline was not indicated as a problem (as pointed out by (Rogé et al. (2017, apud Ume, 2023)). However, for producers new to organic production in the strict sense, there was a drop in productivity during the transition, especially in the early stages. Explanations include lack of knowledge about soil management, products that can be used for phytosanitary control, etc.

The second point is related to price premiums. When products are delivered to local markets (direct sales or supermarkets) a problem is detected: there is no willingness to pay premium prices in small centers. This may be related to the small absolute amount of people with higher income. According to Organis (2023), 56% of consumers who are not regular consumers of organic products are not willing to pay a price premium for them. These facts lead to the absence of the compensation cited in Ferreira et al. (2020). Despite having few or no price premium, market access is easier once certification is achieved. However, another aspect not found in the literature may have an impact on the outcome of the activity and should be considered. In direct sales, there are fluctuations during the month. Considering that there are salaried consumers or those whose main income is their pension, sales decrease the further away they are from being paid.

There are two final points also related to price premium. When products are delivered to government programs there is a 30% price premium. The question here is a kind of rigidity due to contractual schedule. This channel is accessed by public notices and, depending on the certification date, the products will reach premium prices in one year at limit. This time must be added to the conversion period and deepens the problem of having no financial compensation for organic practices. Secondly, from the beginning of the transition process, it can be said that products (and their production processes) already have differentiating characteristics. On the other hand, a decrease in productivity for the same area is due to a decrease in production. As a result, revenues decrease and there is no price compensation. In other words, there are average short-run costs and opportunity costs associated with changing systems that could be at least partially offset by partial price premiums (relative to the full price of an organic product) in government purchases.

4. Conclusions

Findings allow us to conclude that local studies are essential to the transition dynamics comprehension. The information on the impact of the transition process collected in the study shows that there are significant difficulties, some unusual in the literature, which is an important contribution of the study. The conversion process needs to be motivated by public policy, as production in small centers faces problems in obtaining premium prices in private markets along with issues in the transition process and contractual constraints in government purchases. From the private (producer) perspective, these constraints need to be incorporated into their decision-making process towards organic production.

Another contribution is the scientific character given to facts that are sometimes known to the actors involved, but which are not always systematized and published. With this and other studies, it is possible to formulate public policies taking into account these results, i.e. on a scientific basis.

As a recommendation for future research, based on the findings, it is suggested to continue studying productivity behavior and its impact on costs, the potential and impacts of applying price premiums during the transition, and the possibilities and legal feasibility of contractual improvements in public purchases.

References

Bang, R. et al. (2024) Conventional or organic cattle farming? Trade-offs between crop yield, livestock capacity, organic premiums, and government payments. *Agricultural Systems*, v. 218, 103991. https://doi.org/10.1016/j.agsy.2024.103991

Durso, E.D., et al. (2018) Produção convencional ou orgânica? O dilema dos pequenos produtores do Oeste do Paraná. *Revista da Micro e Pequena Empresa*, 12(3), 85–100.

Ferreira, A.S., Coelho, A.B. (2017) O papel dos preços e do dispêndio no consumo de alimentos orgânicos e convencionais no Brasil. *RESR*, 55(4), 625–640.

Lourenço, A.V., Schneider, S. (2022) Características da agricultura orgânica no Sul do Brasil: evidências a partir do Censo Agropecuário 2017. *DRd – Desenvolvimento Regional em debate*, 12, ed. esp. (Dossiê), 165–190.

McBride, W.D. et al. (2015) *The profit potential of certified organic field crop production*. *ERR-188*, U.S. Department of Agriculture, Economic Research Service.

ORGANIS (2023). *Panorama do consumo de produtos orgânicos no Brasil 2023*. S.l.: ORGANIS, 2023. https://organis.org.br/pesquisa-consumidor-organico-2023/. Accessed on: February 17, 2025.

Singh, S.P. et al. (2023) *Factors* influencing the adoption of organic farming: a case of Middle Ganga River basin, India. *Organic Agriculture*, 1–11. https://link.springer.com/article/10.1007/s13165-022-00421-2. Accessed on: May 17, 2023.

Ume, C. (2023) The role of *improved* market access for small-scale organic farming transition: Implications for food security. *Journal of Cleaner Production*, 387, 135889.

Willer, H., et al. (Eds.) (2022) *The World of Organic Agriculture. Statistics and Emerging Trends 2022*. Research Institute of Organic Agriculture FiBL, Frick, and IFOAM – Organics International. https://orgprints.org/id/eprint/42971/1/willer-etal-2022-world-of-organic.pdf. Accessed: 02 September 02, 2022.