

**QUALIFICATION ACTIONS FOR RURAL WORKERS IN MUNICIPALITIES OF
PARANÁ'S NORTHWEST REGION: THE CASE OF ALTO PARANÁ AND NOVA
ALIANÇA DO IVAÍ**

***AÇÕES DE QUALIFICAÇÃO PARA OS TRABALHADORES RURAIS EM
MUNICÍPIOS DA REGIÃO NOROESTE DO PARANÁ: O CASO DE ALTO PARANÁ E
NOVA ALIANÇA DO IVAÍ***

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DE LA REGIÓN NOROESTE DE PARANÁ: EL CASO DE ALTO PARANÁ Y NOVA
ALIANÇA DO IVAÍ***



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How to reference this paper:

SAMPAIO, Ariana Castilhos dos Santos Toss; SILVA, Juliani Vicente da. Qualification actions for rural workers in municipalities of Paraná's northwest region: the case of alto Paraná and Nova Aliança do Ivaí. **Revista Geografia em Atos**, Presidente Prudente, v. 10, n. 00, e026001, 2026. e-ISSN: 1984-1647. DOI: 10.35416/2026.11014.



| **Submitted:** 21/05/2025

| **Revisions required:** 29/11/2025

| **Approved:** 10/12/2025

| **Published:** 17/04/2026

Editors: Prof. Dr. Nécio Turra Neto
Prof. Me. Karina Malachias Domingos dos Santos

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ABSTRACT: In the face of technological advances in the Brazilian countryside, many jobs have ceased to exist. The introduction of agricultural machinery has replaced countless workers in various rural activities. In the northwest region of Paraná, the influence of a sugarcane powerplant stands out, which attracted labor to the region from the 1980s to the 2000s. However, with the process of agricultural modernization, many of these jobs were eliminated. In this sense, this study aims to identify the impacts of mechanization in two municipalities, Alto Paraná and Nova Aliança do Ivaí, aiming to analyze which jobs were eliminated in the countryside. In addition, data collection was conducted on the qualification courses offered in these cities, with the aim of understanding how the process of relocating the affected workers is being conducted. However, we identified that the qualification policies implemented have been considered inefficient in its objective.

KEYWORDS: Professional qualification. Rural workers. Countryside modernization.

RESUMO: Diante dos avanços tecnológicos no campo brasileiro, muitos postos de trabalho deixaram de existir. A inserção de máquinas agrícolas substituiu inúmeros trabalhadores em diversas atividades rurais. Na região Noroeste do Paraná, destaca-se a influência de uma usina sucroenergética que, nas décadas de 1980 a 2000, atraiu mão de obra para a região. No entanto, com o processo de modernização agrícola, grande parte desses empregos foi extinta. Nesse sentido, este trabalho tem como objetivo identificar os impactos da mecanização em dois municípios da região Alto Paraná e Nova Aliança do Ivaí, visando analisar quais postos de trabalho foram eliminados no campo. Além disso, foi realizado o levantamento de dados sobre os cursos de qualificação ofertados nessas cidades, com o intuito de compreender como está sendo conduzido o processo de realocação dos trabalhadores afetados. Contudo, identificamos que as políticas de qualificação realizadas têm sido consideradas ineficientes para realocar esses laboriosos.

PALAVRAS-CHAVE: Qualificação profissional. Trabalhador rural. Modernização do campo.

RESUMEN: Dados los avances tecnológicos en el campo brasileño, muchos puestos de trabajo han dejado de existir. La introducción de maquinaria agrícola reemplazó a innumerables trabajadores en diversas actividades rurales. En la región Noroeste de Paraná se destaca la influencia de una usina sucroenergética que, entre las décadas de 1980 y 2000, atrajo mano de obra a la región. Sin embargo, con el proceso de modernización agrícola, gran parte de estos empleos fueron eliminados. En este sentido, este trabajo tiene como objetivo identificar los impactos de la mecanización en dos municipios de la región Alto Paraná y Nova Aliança do Ivaí, buscando analizar qué empleos fueron eliminados en el campo. Además, se recopilaron datos acerca de los cursos de cualificación que se ofrecen en estas ciudades, con el objetivo de comprender cómo se está llevando a cabo el proceso de reubicación de los trabajadores afectados. Sin embargo, identificamos que las políticas de calificación implementadas han sido consideradas ineficientes para reasignar a estos trabajadores.

PALABRAS CLAVE: Cualificación profesional. Trabajador rural. Modernización del campo.

Introduction

In recent decades, the Brazilian agrarian space has undergone profound transformations driven by agricultural modernization, which was intensified from the 1970s onwards with the expansion of the technical-scientific-informational environment (Santos, 2006). The introduction of advanced technologies in the field, such as agricultural machinery and automated production systems, redesigned production dynamics, gradually replacing the human workforce (Silva, 1982). This process, although it has increased productivity and consolidated agro-industrial chains in the country, has also generated significant social impacts, especially for salaried rural workers, who have been displaced from their jobs.

In the Northwest Region of Paraná, this phenomenon was intensified by the territorialization of the sugar-energy sector, which, through incentives such as the National Alcohol Program (Proálcool), boosted the installation of mills and distilleries in small and medium-sized municipalities. The case of the Coopcana plant, installed in 1979, is emblematic: it even employed thousands of workers in the manual cutting of sugar cane. However, with the mechanization of harvesting and planting, a drastic reduction in the demand for labor was observed, triggering processes of structural unemployment and forced migration, in addition to directly affecting the subsistence of hundreds of peasant families (Ribeiro, 2011, 2016).

In this scenario, professional qualification emerges as a fundamental strategy to mitigate the social effects of the modernization of the field. However, as evidenced in several studies (Silva, 2014; Silva 2011; Souza, 2002; Souza, 2008), public policies aimed at the qualification of rural workers have been punctual, discontinued and poorly aligned with local realities. Sometimes, the courses offered are directed to the demands of the productive sector, neglecting the profile, preferences, and needs of the working population.

Therefore, this article aims to analyze the impacts of agricultural mechanization on the rural labor market in two municipalities in northwestern Paraná: Alto Paraná and Nova Aliança do Ivaí, and evaluate the professional qualification actions carried out in these locations as well. From the analysis of statistical data, interviews with former sugarcane cutters and survey of training actions implemented, we seek to understand how the productive restructuring of the field has influenced the social and economic destinies of these workers and which paths have been built or neglected for their reintegration into the world of work.

Agricultural modernization and the installation of sugar mills in the northwest of Paraná

The 1970s marked the beginning of agricultural modernization in the country, also called The Green Revolution, which promoted the expansion of agricultural borders, the strengthening of agrarian capitalism, and the increase in the presence of flywheel workers, known as “bóias-frias.”

In order for the countryside to keep up with technological changes, the Brazilian state launched public policies that included colonization projects, agricultural subsidies, and the installation of industrial poles in different regions. In Paraná, especially in the Northwest, the sugar-energy sector was the main driver of these transformations. The National Alcohol Program (Proálcool) encouraged the implementation of mills through low interest rates, long terms, and subsidies (Mello; Fonseca, 1981).

Most of the sugar mills in Paraná were installed in the 1970s, especially in the North and Northwest regions, driven by the proximity to the state of São Paulo and the favorable soil and climatic conditions for the cultivation of sugarcane. According to Shikida (1998), of the 30 industries installed in the state, 65% used resources from Proalcohol.

This sector became markedly territorialized, becoming the main economic activity of small municipalities, which began to structure their dynamics according to the needs of the plants (Souza, 2017; Silva, 1982). This included the construction of housing, the conservation of roads, and the supply of warehouses to ensure the logistics of production.

The Coopcana plant, installed in 1979, employed more than 3,500 workers in 2008 (Sindicato dos Trabalhadores Rurais de Tamboara, 2019). However, the increasing mechanization of planting and harvesting eliminated most of these jobs, and those who did not seek qualification ended up inserted in the informal market (Sampaio, 2023).

According to Souza (2017), public policies were insufficient to offer professional qualifications compatible with technological transformations, generating structural unemployment. For this reason, the present research sought to identify the social and economic impacts of agricultural mechanization and verify whether the affected workers participated in qualification courses capable of promoting their reintegration into the labor market.

This work also identified the current offer of courses for rural workers in these locations, however, Sampaio (2023) emphasizes that the qualification actions that have been carried out in the rural environment are still limited and little visible, which makes it difficult for workers to enter new labor functions.

Impacts of mechanization in the field

After the 1970s, the Brazilian countryside underwent intense transformations resulting from the advance of agricultural modernization, a process that removed thousands of rural workers from their jobs. Historically, both grain and sugarcane cultivation required large contingents of manual labor. However, with the incorporation of new technological packages and increasing mechanization, especially in recent decades, the sugar energy sector has experienced an accelerated process of automation in planting and harvesting sugarcane, drastically reducing the need for human labor (Silva, 1982; Sampaio, 2020; Ribeiro, 2011; 2016; Shikida, 1998).

The introduction of mechanized harvesters has profoundly transformed the organization of labor in the industry. The almost total reduction of manual cutting implied not only in the elimination of formal posts, but also the rupture of life trajectories marked by the historical dependence on this type of occupation. As Thomaz Júnior (2014) and Alves (2015) show, the modernization of the sugar and energy sector operates selectively: it concentrates technology and productivity in certain poles, while expanding areas of vulnerability and precariousness, evidencing the contradictory character of the advance of capital in the field.

From the workers' point of view, the impacts were multiple. The reduction of formal jobs in manual cutting has led to increased competition for places in increasingly specialized agricultural activities or in precarious urban sectors. This process expresses what Antunes (2018, 2020) calls structural unemployment, characteristic of contemporary capitalism, in which technology incorporated into production eliminates functions previously performed by large contingents of workers, without generating, on the other hand, new vacancies in the same proportion. In the case of sugarcane, automation has reduced thousands of cutter jobs and created far fewer opportunities for machine operators, generating a permanent surplus of labor driven from the field.

The consolidation of mechanization can be observed in the very recent dynamics of the sector. Data from Conab (2025) indicate that 92.4% of harvesting operations were mechanized, confirming the definitive replacement of the traditional manual cutting system by automated technologies. In planting, the expansion of mechanized planters, which simultaneously perform soil preparation, planting, fertilization and the application of pesticides, also contributed to reducing the participation of manual workers (Embrapa, 2025), reinforcing the downward trend

in demand for labor, as already anticipated by Silva (1982).

This process intensified distinct movements among workers. Many began to migrate in search of low-paying urban occupations; others opted for return migration to regions of origin, as demonstrated by Ribeiro (2016); and part sought professional qualification courses to try to reposition themselves in the agricultural sector itself (Silva, 2011). Here, the concept of territorial labor mobility, discussed by Thomaz Júnior (2003), helps to understand these dynamics: the productive restructuring imposed by modernization creates permanent flows of displacement, in which workers are forced to move between cities and regions searching for temporary, unstable and precarious occupations.

However, recent studies show that the municipalities of Tamboara and Paranavaí have promoted few initiatives aimed at professional qualification as a strategy to mitigate the impacts of structural unemployment generated by mechanization (Sampaio, 2023). Given this scenario, it is essential to expand research on the socioeconomic effects of modernization in other municipalities in the area of Coopcana, such as Nova Aliança do Ivaí and Alto Paraná, in order to subsidize public managers in the formulation of qualification policies that can offer real alternatives for the reintegration of workers. Systematic investment in vocational training therefore emerges as a key strategy to address the effects of agricultural modernization and ensure new opportunities for the local workforce.

Agricultural production of the municipalities of Alto Paraná and Nova Aliança do Ivaí

To understand the impact of sugarcane cultivation in the municipalities where Coopcana operates: Alto Paraná and Nova Aliança do Ivaí, a survey of agricultural production data from these municipalities was carried out, providing quantitative information on the territorial area and agricultural production.

Regarding the territorial and productive comparison, the municipalities present significant differences in territorial area: Alto Paraná with 407,556 km² and Nova Aliança do Ivaí: 131,791 km². The agricultural production table shows some relevant differences, note in Table 1 that shows agricultural production in Alto Paraná (Table 1)

Table 1 – Harvested Area and agricultural production by type of temporary crop in Alto Paraná

Temporary culture	Harvested Area (t)	Production (t)
Sugar cane	2,868	173,015
Cassava	1,860	46,500
Soybeans (in grains)	750	2,603
Maize (corn)	198	591
Peanuts (in shell)	242	1,050
Pineapple (thousand fruits)	10	250
Beans (in grains)	-	-
Watermelon	9	360

Source: Ipardes, 2024.

In Table 1 we can observe the agricultural production of Alto Paraná, where the cultivation of sugarcane and cassava stands out, but also presents other crops such as soybeans, corn, peanuts, pineapple and watermelon. On the other hand, although with a smaller territorial area, sugarcane production is higher in Nova Aliança (Table 2).

Table 2 - Harvested Area and agricultural production by type of temporary crop in Nova Aliança do Ivaí

Temporary culture	Harvested Area (t)	Production (t)
Sugar cane	3,725	252,276
Cassava	1,160	25,680
Soybeans (in grains)	290	841
Maize (corn)	120	444
Pineapple (thousand fruits)	4	115
Watermelon	4	64

Source: Ipardes, 2024.

As observed in Table 2, Nova Aliança do Ivaí has a higher cultivation of sugarcane possibly due to factors such as proximity to the processing plant Coopcana, located 15 kilometers from this municipality.

However, we can observe that Nova Aliança do Ivaí, with a smaller territory, has a higher sugarcane production, which indicates that the municipality's economy may be more dependent on this sector, while Alto Paraná has a more diverse distribution of its production, which reduces dependence on a single sector.

Cassava production in Alto Paraná is higher than in Nova Aliança, which shows an economic vocation focused on the starch and flour industries. Thus, Alto Paraná has a slightly more diverse agriculture, which can be beneficial to mitigate risks such as market fluctuations and pests that affect specific crops.

While in Nova Aliança do Ivaí, it could pose an economic risk if the sector suffers price drops or climate problems. In this sense, this difference can directly influence the economic resilience of each municipality. In times of crisis in the sugar and alcohol sector, Alto Paraná may have more viable alternatives, while Nova Aliança would be more vulnerable.

The predominance of sugarcane in both municipalities influences the destination of agricultural production, prioritizing this crop as the structuring axis of local economies. The regional market, organized around the sugar and ethanol production chain, has presented a reduced supply of direct jobs since the mechanization process of planting and harvesting has significantly reduced the need for labor. This scenario is related to the dynamics of structural unemployment, a phenomenon that, as discussed by Antunes (2018, 2020), intensifies in sectors in which the incorporation of technology replaces the human workforce on a large scale and permanently.

In the case of the municipalities analyzed, mechanization not only reduced manual-cutting jobs, but also limited the possibilities of reintegration into the sugar-energy sector itself, reinforcing a vulnerable condition for families whose income directly depended on this activity. Thus, understanding the centrality of sugarcane in the productive structure of Alto Paraná and Nova Aliança do Ivaí implies recognizing that technological expansion, although it increases municipal productivity, does not automatically translate into proportional generation of jobs, reproducing the structural unemployment characteristic of agricultural modernization.

In this sense, in order to identify the consequences of this process for the local population, we conducted interviews with former sugarcane cutting workers in the municipalities under study. These interviews allow us to observe how the reduction of formal posts, derived from mechanization, impacts the life trajectories, income, and possibilities of professional reintegration of this portion of the population.

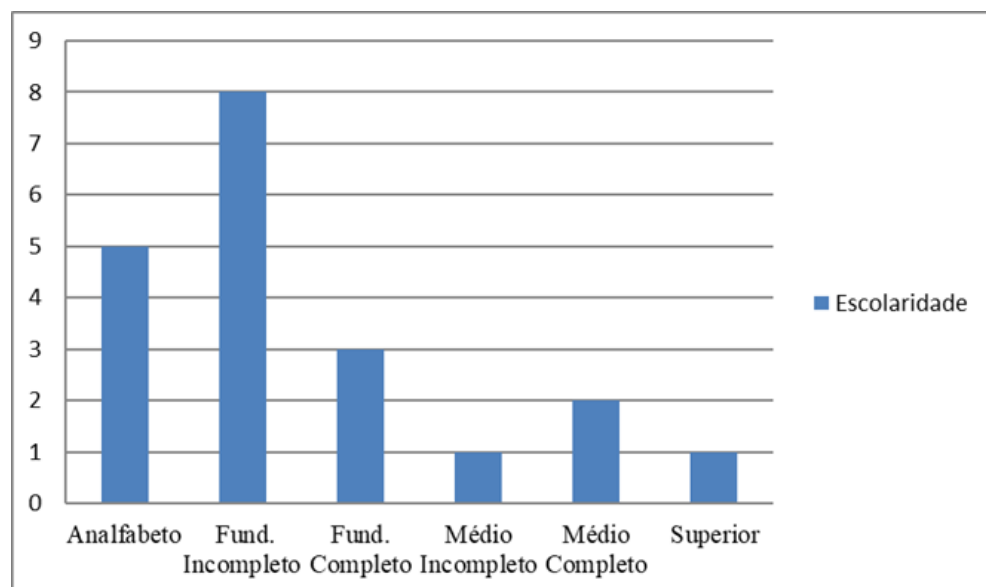
Socioeconomic profile of former sugarcane workers

To obtain data on the socioeconomic profile of former sugarcane workers, this research was conducted in the municipalities of Alto Paraná and Nova Aliança do Ivaí, after approval by the Research Ethics Committee. 20 former sugarcane cutters were interviewed, 10 from each municipality, through questionnaires with semi-structured questions.

The main objective was to analyze the living and working conditions of these workers

after the advance of mechanization in the sugar-energy sector, with emphasis on education, current occupation, and participation in professional qualification courses. The data reveal a scenario marked by social vulnerability, low schooling, labor informality, and limited access to training opportunities. This context is related to what Antunes (2018, 2020) and Alves (2015) identify as a process of derealization of the worker, in which the replacement by the machine breaks historical ties with the craft, displaces professional identities and pushes the worker to multiple forms of survival, almost always precarious. The following are some of the main results obtained (Figure 1).

Figure 1 – Graph of Education of former cane cutters in the municipalities of Nova Aliança do Ivaí and Alto Paraná - 2025

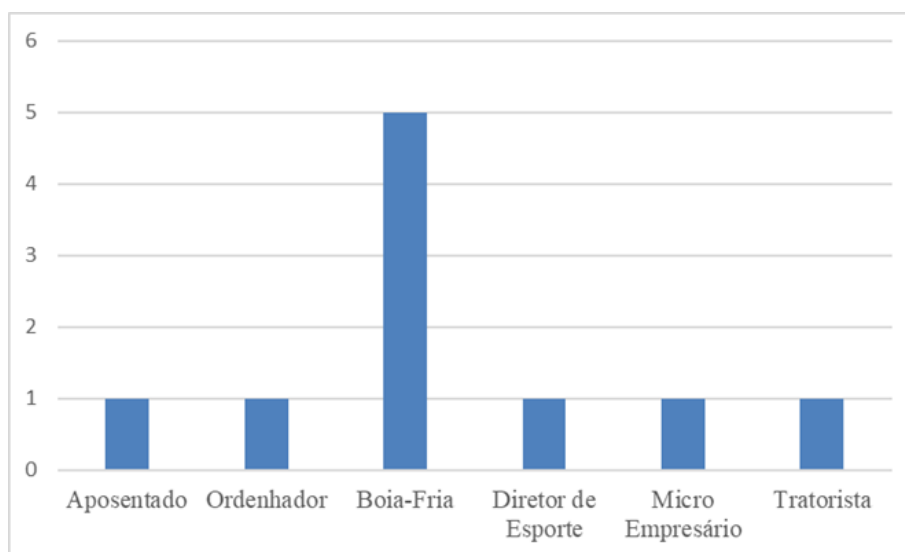


Source: The author, 2025.

Figure 1 shows that 8 interviewees have only incomplete elementary education; 2 have completed high school, and only 1 has higher education. This situation reinforces low education as one of the main obstacles to reinsertion into formal and qualified jobs. Insufficient education limits access to technical courses and reduces occupational mobility, perpetuating the permanence of these workers in the informal market.

The absence of public policies aimed at continued qualification deepens this scenario. This reality dialogues with the analyses of Alves (2015) and Antunes (2018, 2020) on the structural precariousness of work, according to which workers excluded by technological advancement face great barriers to reinsert themselves stably in the market. In Figure 2, we can see where the former sugarcane cutters living in Nova Aliança do Ivaí are currently working.

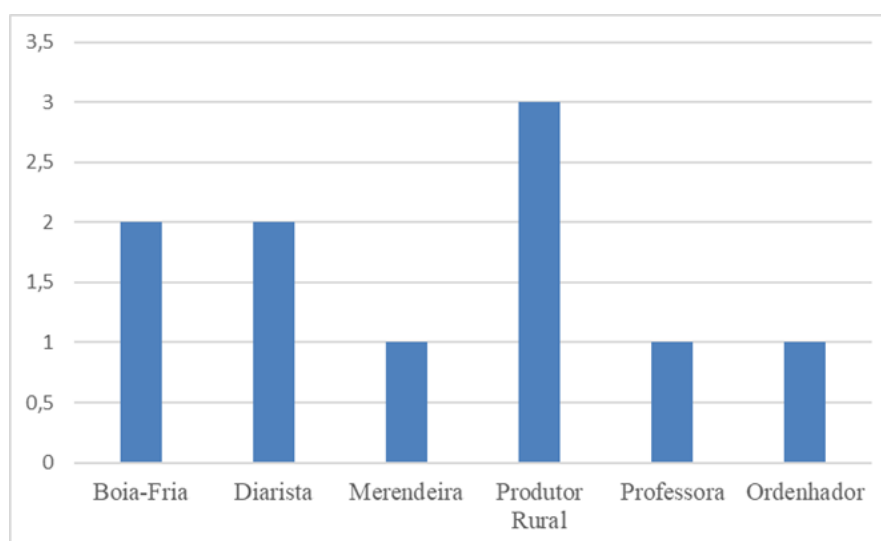
Figure 2 – Graph of the Labor occupation of former cane cutters – Nova Aliança do Ivaí – 2025



Source: The author, 2025.

Figure 2 shows that 5 of the 9 economically active interviewees act as coolies, reinforcing the prevalence of informal rural work in the region. The rest occupy the functions of milker, tractor driver, sports director and microentrepreneur. Only 3 workers have formal ties, which shows fragility in the conditions of productive reintegration.

The predominance of *boias-frias* workers expresses not only the lack of local opportunities, but also the process of precarious insertions in the labor market, as discussed by Antunes (2018, 2020) and Alves (2015). In addition, the displacement between different informal activities, often in different municipalities, approaches what Thomaz Júnior (2003) conceptualizes as territorial mobility of labor, a forced and unstable movement, a direct result of the productive reorganization imposed by mechanization. In Figure 3, we can see where the former sugarcane cutters living in Alto Paraná are working.

Figure 3 – Graph of the Labor occupation of former cane cutters - Alto Paraná – 2025

Source: The author, 2025.

In Alto Paraná, a more diverse distribution is observed: 2 daily cleaners, 2 *boias-frias*, 1 school cook, 1 milker, 1 teacher, and 3 rural producers. Despite the greater occupational diversification in relation to Nova Aliança do Ivaí, it is observed that 7 workers still do not have a formal job, indicating that informal work remains the main alternative for most former cane cutters.

The presence of daily cleaners, *boias-frias*, and milkers reinforces the continuity of informality and shows that low schooling limits access to jobs with greater social protection. On the other hand, the presence of 3 rural producers indicates individual survival strategies in the face of loss of work in manual cutting. It is important to highlight that this condition does not refer to the seasonal work of cutting sugarcane, but rather to small agricultural enterprises developed by the workers themselves after their disconnection from the sugar and energy sector, initiatives that represent forms of occupational reconstruction in the absence of formal alternatives.

Ex-cane cutters and professional qualification: challenges in reintegration

Professional qualification plays a key role in the reintegration of former sugarcane cutters into the labor market, especially given the transformations that have occurred in the agricultural sector, marked by mechanization and reduction of manual labor. Many of these

workers, when they are disconnected from the sugarcane activity, face difficulties in adapting to the new requirements of the world of work, which demands specific technical skills and continuous training. In this context, the offer of qualification courses becomes essential to expand the possibilities of insertion in other productive areas, reduce informality, and promote better living conditions. The following are the data on qualification courses taken by former cane-cutting workers (Chart 1).

Chart 1 – Qualification courses held by former Cane Cutters in the municipalities of Alto Paraná and Nova Aliança do Ivaí – 2025

Courses	Alto Paraná	Nova Aliança do Ivaí
Crafts	1	-
Tractor driver	6	1
Vegetable garden management	1	-
Building Electrician	-	1

Source: The author, 2025.

As we can identify in Chart 1, the tractor driver course appears as the most common, especially among respondents from Alto Paraná, with six participants. This suggests that many sought to remain connected to the rural environment, now in functions that require operating machines, a direct reflection of the mechanization that took them away from their previous work.

In Nova Aliança do Ivaí, only one worker completed the same course. The other courses cited as garden management, handicrafts, and building electrician were taken by an even smaller number of people, which shows how much access to professional training is restricted for this public.

It is important to highlight that these courses were not necessarily offered in the municipalities themselves, which indicates that some workers needed to seek training in other locations. This, in itself, already represents a barrier: not everyone has the financial conditions or availability to travel in search of training. The lack of local public policies that guarantee access to quality courses, free of charge and with logistical support, ends up hindering even more the chance of a dignified reintegration into the labor market.

Given this, it is evident the importance of investing in more accessible qualification programs aimed at the real needs of these people, who for years contributed with intense physical effort in the sugarcane crops. Valuing these workers is also offering ways for them to

rebuild their trajectories with dignity.

Thus, we identified that the lack of qualification has been an obstacle for these workers to be reinserted in the labor market, as well as the lack of qualification causes the income of these workers to be around 1 to 2 monthly salaries. Look at the average monthly income of these laborers (Chart 2).

Chart 2 – Qualification courses held by former cane cutters in the municipalities of Alto Paraná and Nova Aliança do Ivaí – 2025

Income	Alto Paraná	Nova Aliança do Ivaí
Up to R\$1,518.00	4	6
From R\$1,518.00 to R\$2,277.00	-	1
From R\$2,277.00 to R\$3,036.00	4	3
Above R\$ 3,036.00	2	-

Source: Prepared by the author, 2025.

In Charts 1 and 2, we can analyze that the data regarding the qualification and income of former sugarcane cutters in the municipalities of Alto Paraná and Nova Aliança do Ivaí reveals a significant correlation between professional qualification and wage improvement. In Alto Paraná, 8 workers participated in qualification courses, while in Nova Aliança do Ivaí only 2 sought this training.

This discrepancy in qualification directly reflects on the income distribution of workers in each municipality. In Alto Paraná, there is a higher concentration of former sugarcane cutters in the highest wage ranges: up to R\$1,518.00: 4 workers and from R\$2,277. 00 to R\$3,036. 00: and 4 laborers and above R\$ 3,036. 00: 2 workers. In contrast, in Nova Aliança do Ivaí, most workers are in the lower wage ranges: up to R\$1,518.00: 6 workers, from R\$2,277. 00 to R\$3,036. 00: 3 workers, from R\$1,518. 00 to R\$2,277. 00: 1 worker, and above R \$ 3,036.00: no worker.

These data indicate that the lack of qualification has been a significant obstacle to the reintegration of these workers into the labor market and to the improvement of their income. However, it is important to consider that the lack of qualification does not only result from individual choices, but is part of a broader process of precariousness in labor relations. Historically, manual sugarcane cutting work, as well as other factory floor and agribusiness activities, required little or no formal qualifications. Thus, when replaced by machinery, these workers are forced to seek minimal alternatives for survival, often in informal and low-paid occupations, for which high levels of schooling are also not required.

In this sense, the educational insufficiency added to the lack of previous qualification amplifies the difficulties of reintegrating these former cane cutters into formal activities with greater social protection. This condition is directly related to the process of structural precariousness of work, discussed by Alves (2015) and Antunes (2018, 2020), in which workers traditionally inserted in functions that required low qualification end up encountering enormous barriers when seeking new opportunities after mechanization. The absence of adequate or accessible technical courses keeps most of these professionals restricted to the salary ranges of one to two monthly minimum wages, perpetuating their social vulnerability.

Given this, it is clear that investments in vocational qualification programs are essential to promote the reintegration of these workers into the labor market and ensure them more dignified living conditions. The results of this research corroborate the finding that the majority did not participate in qualification courses throughout their working lives, which makes it difficult not only to access employment, but also to occupations with better pay and greater stability.

Thus, it is understood that, to promote the economic inclusion of these workers, it is essential to expand the offer of qualification courses that include areas such as agricultural mechanics, agroindustry, agroforestry, crafts, organic horticulture, and rural entrepreneurship, among others. These trainings would enable the development of specific skills aligned with local demands, increasing the chances of insertion in formal jobs.

In addition, for such opportunities to be effective, it is necessary to ensure public policies that ensure free access to training and facilitate travel to training sites, avoiding economic and logistical barriers to the participation of these workers. This perspective is in line with reflections by Thomaz Júnior (2003), who points out that productive reorganization processes require structured policies to support workers, especially in the transition to new activities. In this way, it would be possible to build a more inclusive scenario and with better future prospects for this population. Let's see in the next subtitle the qualification actions that were offered in the municipalities of Alto Paraná and Nova Aliança do Ivaí.

Municipal qualification initiatives in Alto Paraná and Nova Aliança do Ivaí

With the advent of agricultural modernization, the qualification of workers emerges as a strategy to mitigate the effects of structural unemployment, intensified by technological evolution in production processes. In both urban and rural contexts, the demand for skilled labor is increasingly present to supply the new emerging jobs.

On the other hand, authors such as Harvey (2011) and Martins (2002) emphasize that qualification has been placed as an indoctrination process to meet the dictates of capital, where the commodification of qualification has occurred, being transferred to the worker the responsibility for the unemployment situation. However, the fact remains: those who do not qualify often face unemployment or are relegated to less favorable positions in the labor market.

The qualification policies that have been implemented so far have received many ruptures from one government to another. The public power has been omitted and transferred to the business sector in the direction of the qualification offer (Silva, 2011).

We note the need for state qualification policies, which can be improved over the years. We realize the need for qualification policies that do not only take the interest in qualifying for positions required by the labor market. Qualification should be seen as the capacity to develop human potentialities. Let's look at the qualification courses held in the municipalities of Alto Paraná and Nova Aliança do Ivaí (Chart 3).

Chart 3 – Courses offered in 2025-Alto Paraná and Nova Aliança do Ivaí

ALTO PARANÁ	NOVA ALIANÇA DO IVAÍ
Gourmet sweets office	Lecture-Entrepreneurship
Bakery shop	Formalization / entrepreneurship event
Cupcake workshop	Fair of the Entrepreneur - Nova Aliança do Ivaí
Bakery shop	On-site workshop - pricing for crafts and services
Pasta and sauces course workshop	In-person workshop - Trilha do MEI: to manage
Pizzaiolo course	Workshop - Bakery
	Workshop - Dairy products

Source: The author, 2025.

Although there is a variety of workshops and lectures, most of the courses offered in the two municipalities are of short duration and do not take into account the profile of rural workers. The training is, to a large extent, fast, without technical deepening or post-training follow-up.

During the interviews, many cane cutters reported the desire to remain active in rural areas, but pointed out that the courses offered so far do not dialogue with this reality. The lack of affinity with the topics covered was one of the reasons that led to low participation in qualification courses.

Thus, we understand the importance of taking into account the profile of the worker and their preferences, because qualifying only to meet the interest and needs of the market will not allow the development of their potential, their creative capacity, and much less their citizenship (Campos, 2007).

It is necessary to take into account the profile of the worker, and next to these municipalities has the SENAR located in the city of Paranavaí. With an adequate plan, other courses can be offered taking into account the profile of the rural worker. Let's look at some examples of courses that can be taken in the rural area that need qualification to be run effectively (Chart 4).

Chart 4 – Courses to qualify the field worker

Courses	What the student will learn
Organic farming	Production systems, agroecological fertilization, and homemade methods of pest and disease control through the preparation of natural solutions.
Artisanal food production	Making foods that, in addition to being delicious, are a way to take advantage of surplus fruits in the production of the season (crop).
Wood crafts-bamboo basics	The techniques of cracking and simple tying, which are used, for example, in the manufacture of torches. In addition, the course will teach you how to finish the parts.
Corn straw crafts-braided	Work with the raw material from its harvest, through the selection of straw, the choice of tools that will be used, cleaning and correct cutting on the cob, processing and coloring the straw, to the manufacture of a basket and a bag.
Basic floriculture	About seedling production nurseries, types of substrates most suitable for different species of flowers, multiplication techniques, and the main cultural treatments to keep flowers and ornamental plants always beautiful and sappy, in addition to controlling the pests and diseases that most attack these plants.
Basic strawberry	Planting strawberries and getting basic information about the culture.

Passion fruit basic	Implement a passion fruit orchard on their properties or even those who already work in the chain and want to professionalize their production.
Olericulture - minimum processing - principles and practices	The minimal processing of vegetables; this technique refers to those vegetable products that undergo a series of operations that make them ready for consumption and preparation.
Equine culture	Equine husbandry and dressage
Provision of services	Build fences - either barbed wire or plain wire
Brushcutter	Use a brushcutter in agricultural activities.
Rural tourism	Tourism and hospitality in rural areas, types of accommodation, food services and also how to assess tourist satisfaction.

Source: Senar, 2023.

Table 4 presents courses provided by the National Rural Learning Service (SENAR), aimed at training producers and rural workers. The contents range from agricultural techniques, such as organic farming and strawberry and passion fruit cultivation, to complementary areas such as handicrafts, floriculture, service provision, and rural tourism. They are training proposals that, in addition to promoting productive development, also contribute to the diversification of activities in rural areas and the enhancement of local knowledge.

Although all these courses are listed in the official catalog of SENAR, it is observed that, in the analyzed municipalities, such training has not been effectively offered. Even when local institutions enter into partnerships with SENAR, the selection of available courses often disregards the socioeconomic profile and the real needs of small farmers and salaried rural workers.

In practice, there has been a tendency to outsource training actions to the “S” system without proper territorial planning or prior diagnosis of the local rural reality. Therefore, there is a lack of a more strategic initiative from the municipal managers and partner institutions so that the offer of courses is aligned with the challenges faced in the field, promoting a qualification consistent with the diversity and specificity of rural activities.

International guidelines on qualification in the field

Other important skills for the rural sector are also evidenced in the North American site called Zippia (2023), such as: harvesting, mowing the grass, handling agricultural equipment with dexterity, doing preventive maintenance on equipment, handling beef cattle, as well as maintaining equipment and services for deworming, feeding, pinning and marketing of inputs,

in addition to having dexterity and listening skills and physical strength.

The role of the OIT, according to Zippia (2023), is to bring training and skills to people as a way to address the challenges of poverty. According to the institution:

By promoting employability and expanding income-generating opportunities, vocational training can lift women and men out of poverty and foster sustainable rural livelihoods. The OIT's Training Programme for Rural Economic Empowerment (TREE) is an example of a proven approach that helps people living in poor rural communities develop the skills and capacities needed for employment and income generation (OIT, 2023).

In other words, vocational training can be an effective tool for social inclusion and combating poverty in rural areas. The OIT has developed the manual "Training for Rural Economic Empowerment (TREE)," aimed at guiding managers and partners in the implementation of qualification programs adapted to local realities, prioritizing vulnerable groups such as women, people with disabilities, and informal workers.

The generic TREE Manual is not a rigid project model, but a guide specifically designed to plan, design, and implement training and post-training support programs aimed at empowering poor people and their communities. This is a comprehensive document that presents systematic processes for implementing a skills development program based on the TREE methodology. The manual brings together guidelines, application tools, and materials that assist planners, project managers and partners responsible for skills development programs in the context of poverty reduction and empowerment promotion strategies (OIT, 2023).

This document, in fact, according to the institution itself, serves as a guideline and guide for other organizations so that disadvantaged target groups, such as poor women and people with disabilities, have employment opportunities and are economically empowered.

However, in Brazil, what has happened is an incipient action of the state to qualify the rural worker, as has also occurred in other countries. According to Martin (2020), when analyzing the labor market in the United States, Mexico and other countries, it is observed that the attempts and actions of unions and commerce in order to protect rural workers do not account for all workers, with a lot of exclusion and, consequently, inefficiency in their qualification for jobs and demands of the agribusiness market. As a result, these workers suffer from unemployment due to the scarcity of resources that assist them.

In this sense, we understand that the state is investing more and more in agricultural modernization, and the responsibility for unemployment falls more and more on the shoulders

of the industrious. We arrive, then, at the consideration that an investment focused on qualification and training of the population could transform the reality of millions of workers currently unemployed or dependent on informal work. Such an approach would not only broaden employability opportunities, but also act as a mechanism to reduce persistent social inequalities in Brazil.

Final remarks

The present work demonstrated that professional qualification, despite being a strategic tool for economic and social development, is not enough, by itself, to face the challenges of structural unemployment caused by agricultural modernization. The mechanization and automation of activities in the countryside have been eliminating traditional occupations, especially in the sugarcane sector and family farming, without effective public policies being implemented to reabsorb this workforce. This scenario reinforces what authors such as Antunes (2018, 2020) and Alves (2015) point out: productive restructuring and technological advancement tend to deepen the precariousness of labor relations, affecting mainly historically vulnerable groups.

In the northwest of Paraná, the region where the analyses of this study are concentrated, the economic dependence of the agro-industrial sector, especially on sugarcane, makes the absence of consistent qualification policies even more serious. With each new government, programs are discontinued or reformulated, which shows the lack of state policies that guarantee continuity, planning and concrete results.

In addition, it was found that most of the qualification initiatives are outsourced to the “S” system or to private institutions, financed with public resources. This delegation of responsibilities, added to the low flexibility of the access criteria and the scarce dissemination of the courses, restricts the scope of the actions. Vulnerable groups, such as women, people with low education, and rural residents, remain on the margins of these opportunities, reproducing inequalities that accumulate over generations.

Another critical point observed was the absence of systematic monitoring by the government throughout the training process. There is no monitoring from enrollment to the insertion of graduates in the labor market. This contributes to the high dropout rate, since the difficulties faced by the participants are not identified or solved, reinforcing the cycle of

informality and labor instability described by authors who analyze the contemporary precariousness of work.

Faced with this panorama, we advocate the formulation of structured, permanent, and territorialized public policies that integrate professional qualification with employability and human development. Training should be thought beyond the specific demands of the market: it should promote citizenship, self-esteem, and social insertion. It is necessary to listen to local actors, respect regional contexts and ensure the protagonism of rural workers.

Investing in skills with a focus on social inclusion is key to breaking historical cycles of inequality and exclusion. The state must assume a central role in this process, ensuring that rural workers have access to training opportunities capable of transforming their realities. Only in this way will it be possible to build a more just society, with income generation, dignity, and sustainability in the countryside.

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CRediT Author Statement

- ☐ **Acknowledgements:** Recognition to the State University of Paraná for promoting the Junior Scientist Scholarship (AF UNESPAR).
 - ☐ **Funding:** Junior Scientist Scholarship – Affirmative Action UNESPAR – Paranavaí Campus.
 - ☐ **Conflicts of interest:** None.
 - ☐ **Ethical approval:** Approved by the ethics committee of UNESPAR - Paranavaí Campus.
 - ☐ **Data and material availability:** Data on agricultural production are available on the mentioned websites. Data from the field interview, if accepted, will be disclosed in this work.
 - ☐ **Authors' contributions:** The first author served as the supervisor, collected the data, and wrote the paper; the second author, a research fellow/PIC, assisted with data collection.
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