THE BOLIVIAN ORGANIC QUINOA IN THE FAIRTRADE MARKET, IMPLICATIONS FOR THE WEAKEST LINK IN THE VALUE CHAIN: SMALL-SCALE FARMERS †

[LA QUINOA ORGÁNICA BOLIVIANA EN EL MERCADO JUSTO, IMPLICACIONES PARA EL ESLABÓN MÁS DÉBIL DE LA CADENA DE VALOR: LOS PEQUEÑOS AGRICULTORES]

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SUMMARY

Background: The fair trade model seeks to redress the imbalance of power in global supply chains. Unlike conventional trade structures, this commercial alternative purport to benefit small farmers and workers in developing countries. In the real world, however, small-scale producers are often excluded from the benefits. **Objective**: To analyzes organic Bolivian quinoa as a Fairtrade product and the impacts and challenges that Bolivian quinoa farmers face in the marketing chain. **Methodology:** A documentary analysis of the production system, application of qualitative techniques with local actors involved in the supply chain of Bolivian quinoa, and field work in regional markets were carried out. **Results**: The economic conditions of smallholder quinoa producers are improving under this certification system. However, global oversupply and increased competition are having a significant impact on retail prices and Bolivian sales to foreign markets. The retail price is more than a third higher than the Fairtrade price, maximizing profits at the expense of fair trade. **Implications**: Organic and Fairtrade certified Bolivian quinoa may not be a suitable product for the Fairtrade model. Being a landlocked country and commercial competition from Peru are the two main challenges for small quinoa producers. **Conclusions**: The Bolivian organic Fairtrade quinoa value chain involves several intermediaries, similar to conventional trade. Organic certification is a time-consuming and costly process because farmers cannot cover the costs. The almost non-existent governance structures imply that most decisions are based on the buyer-driven commodity chain, demonstrating the weak bargaining position of farmers. An alternative certification for small quinoa producers could be the Small Producers' Symbol label.
Key words: Bolivian highlands; Fair trade; Quinoa real; Quinoa producers; Value chain.

RESUMEN

Antecedentes: El modelo de comercio justo pretende reducir el desequilibrio de poder en las cadenas mundiales de suministro. A diferencia de los modelos comerciales convencionales, esta alternativa comercial busca beneficiar directamente a los pequeños agricultores y trabajadores de los países en desarrollo. Sin embargo, en la práctica usualmente los pequeños productores suelen quedar excluidos de los beneficios. **Objetivo:** Analizar la quinua orgánica boliviana como producto de Comercio Justo, las implicaciones y retos que se enfrentan los productores bolivianos de quinua en la cadena de comercialización. **Metodología**: se realizó un análisis documental del sistema de producción, la aplicación de técnicas cualitativas con actores locales implicados en la cadena de suministro de la quinua boliviana y trabajo de campo en mercados regionales. **Resultados**: Las condiciones económicas de los pequeños productores de quinua están mejorando con este sistema de certificación. Sin embargo, el exceso de oferta mundial y el aumento de la competencia afectan sustancialmente a los precios al por menor y las ventas bolivianas a mercados extranjeros. El precio al por menor es más de un tercio superior al precio de Comercio Justo, lo que representa una maximización de los beneficios a expensas del comercio justo. **Implicaciones**: La quinua boliviana orgánica y certificada como producto

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de comercio justo, puede no ser un producto adecuado para este modelo. Ser un país sin salida al mar y la competencia comercial de Perú son los dos principales retos para los pequeños productores de quinua. **Conclusiones**: La cadena de valor de la quinua orgánica de Comercio Justo boliviana implica a varios intermediarios, de forma similar al comercio convencional. La certificación orgánica es un proceso largo y costoso la mayoría de los agricultores no pueden cubrir los costes. Las casi inexistentes estructuras de gobernanza implican que la mayoría de las decisiones se basan en la cadena de productos básicos impulsada por el comprador, lo que demuestra la débil posición negociadora de los agricultores. Una certificación alternativa y menos costosa para los pequeños productores podría ser la etiqueta Símbolo de Pequeños Productores.
Palabras clave: Altiplano boliviana; Comercio justo; Quinoa orgánica; Productores de quinoa; Cadena de valor.

INTRODUCTION

Worldwide, organic farming occupies more than 76’403’77743 million hectares of land, owing to a growing demand for organic products (Willer *et al*., 2023). In 2020, the global sales of organic products reached USD 201 billion (Alandia *et al*., 2020; Statista, 2021;). In the present day, consumers are becoming more health-conscious, taking increasing responsibility for balanced nutrition and demanding healthy food products. They prefer natural, organic, sustainable, and locally or regionally produced food commodities, and are willing to pay more for these products. This is related to greater consumer awareness of the impact of their lifestyle on the environment (IICA, 2015a; Del Barco Gamarra *et al*., 2019).

Consumers aligned with the fair trade movement in developed countries are willing to pay a fair price by paying higher prices to developing countries for goods produced under certain conditions. Retailers are required to physically distinguish Fairtrade certified products from non-certified products. They are licensed to use the Fairtrade label on their products (Dragusanu *et al*., 2014; Lombana *et al*., 2017; Ribeiro-Duthie *et al*., 2021a; 2021b;). Fairtrade buyers import certified products and act as intermediaries between producers in developing countries and consumers in developed countries. Producers process, package, repackage, and label products. Brand owners own the property rights and identify points of sale to offer their product portfolio in the destination country (Forum Fairer Handel, 2013; ALADI and FAO, 2014; Fairtrade International, 2024).

In contrast to conventional trade structures, the fair trade is a commercial alternative that pursues practices for the benefit of small-scale farmers and workers in developing countries. To reduce the gap between producers and consumers, Fairtrade networks commonly have fewer intermediaries than the conventional supply chain (Raynolds, 2012; Ribeiro-Duthie *et al*., 2021a; Fairtrade, 2024;). Fairtrade provides a transparent information chain, while profits are distributed equitably among the actors to generate an honest and reliable business relationship (Ceccon and Ceccon, 2010). The fair trade approach seeks to reduce the imbalance of power in global supply chains, characterized by extreme competition and price pressure, in which smallholder producers are often excluded from benefits (Ribeiro-Duthie *et al*., 2021a; 2021b).

Quinoa is one of the twenty products traded under the fair trade scheme (Fairtrade international, 2024). The crop ―known as the golden grain of the Andes― represents a potential answer to climate change, food insecurity and hunger, due to its extraordinary capacity to adapt to extreme environmental conditions (Ruiz *et al*., 2014; Del Castillo et al. 2018). Bolivia is the world's second largest producer of quinoa after Peru, producing 38,800 tons in 2023 (IBCE, 2024). La Paz, Oruro and Potosí are the three main departments in which quinoa is grown. (Figure 1). Quinoa production is fundamental to the economy of many rural communities in Bolivia. Approximately 80% of the 70,000 quinoa producers in the country are smallholders. Among 1,800 existing crop varieties, quinoa real is grown exclusively in Bolivia, giving Bolivian farmers a competitive advantage (FAO, 2011).

More than half of total quinoa production is exported, while only one-quarter is sold on the domestic market (Canales et al. 2020). US, Canada, France, Germany, the Netherlands, and the United Kingdom are the largest quinoa import markets (CBI, 2020; Canales *et al*., 2020; IBCE, 2024). The export price of conventional quinoa grain is significantly lower than certified organic quinoa; however, the price varies constantly, both on the national and international market (IBCE, 2013; Alandia *et al*., 2020).

The International Year of Quinoa, declared by the United Nations in 2013, led to increased international demand. As a result, prices rose, exports boomed, and production areas expanded on all continents. By the end of 2013, prices for Bolivian quinoa had peaked (Winkel *et al*., 2014; Alandia *et al*., 2021). But while the quinoa trade was generating more income, local producers were barely benefiting from the growing demand. Later, the oversupply led to a drop in global market prices increasing the conflict between farmers and exporters (Tschop *et al*., 2018).

During the quinoa boom, farmers stored their crops

to wait for better prices in the future, however, many quinoa producers had to sell their product at lower prices due to a lack of storage facilities and economic necessity. Exporters tried to renegotiate retail prices with importers, reducing their profit margins. However, the weakest link in the value chain —the small producers— had to bear the final cost, in violation of fair trade principles (Stöcker, 2016).

Bolivian quinoa is recognized as a Fairtrade food product since 2004 and as a commercial alternative that guaranteed higher returns for quinoa farming families than the conventional trade (Alandia et al. 2020). However, this did not prove to be as successful as expected (Andersson, 2019). The objective of this research was to analyze the organic production of Bolivian quinoa as a Fairtrade product and challenges faced by small-quinoa farmers in the value chain.

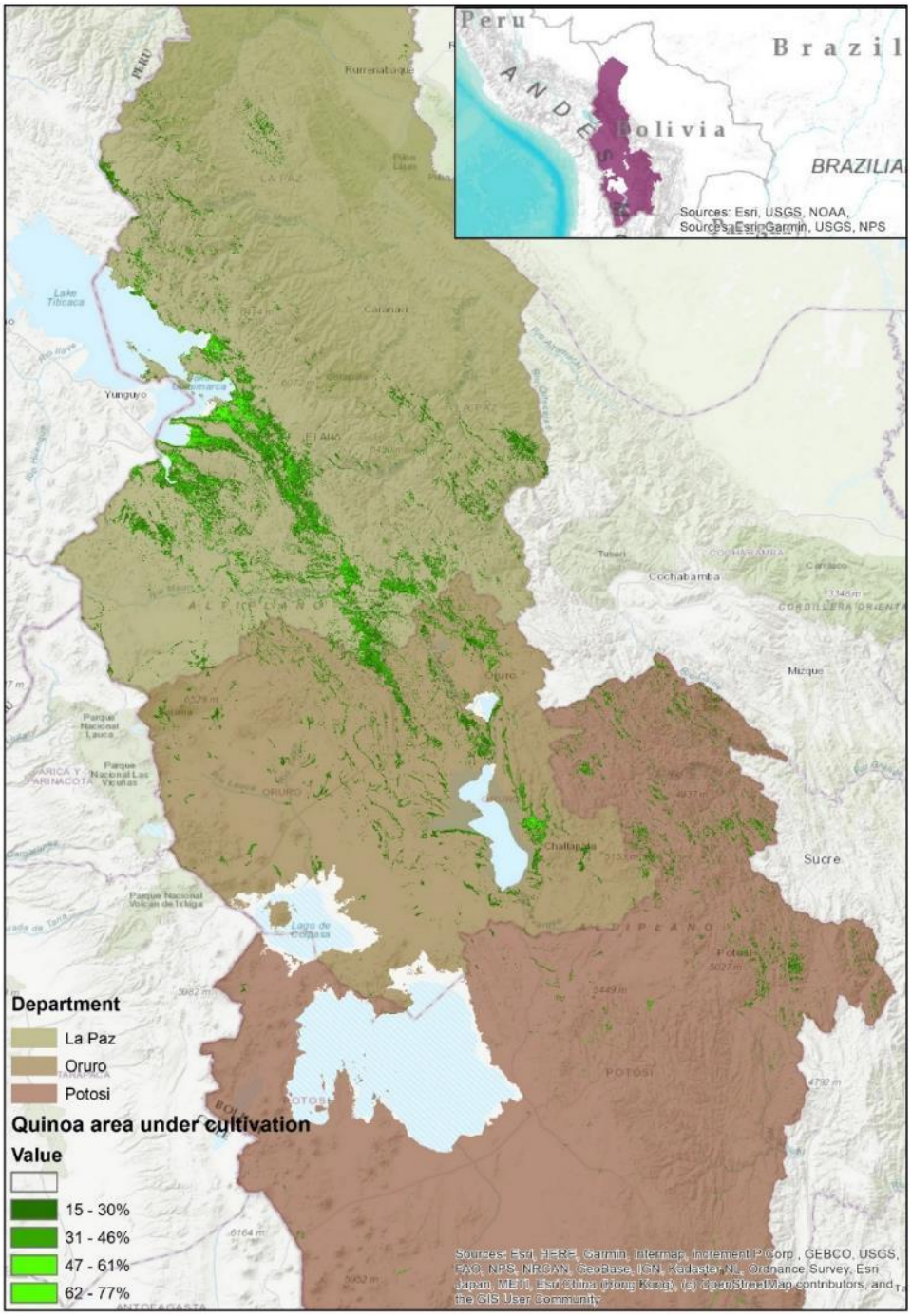

Figure 1. Quinoa production areas in the Departments of La Paz, Oruro and Potosí, Bolivia. Source: Instituto Nacional de Estadística (INE), Bolivia and Buchhorn *et al*., 2020.

MATERIALS AND METHODS

The research included a documentary analysis of Bolivian production records, in-depth interviews and semi-structured questionnaires applied to key actors and quinoa producers, focus groups, participatory observation and fieldwork (Ríos-Guayasamin *et al*., 2016; Trinidad *et al*., 2021; Vaca-Pardo and Reyes-Hernández, 2021), in the main local markets of La Paz, Potosí, Oruro, Challapata and Uyuni, located in La Paz, Oruro and Potosí Departments, Bolivia (Figure 1).

The documentary analysis was based on data from academic studies, books, institutional reports, periodicals, official statistics from national authorities and organizations, scientific research papers, Internet publications and websites of public and private sector stakeholders that provided a general overview of quinoa production and trade in Bolivia under the organic and Fairtrade labels and their certification systems.

A total of 29 interviews were conducted with representatives of conventional and certified quinoa producer associations, processing and export companies, and researchers involved in the farming sector. They were selected based on internet research by using the snowball technique. Questions focused on the dynamics of quinoa production and trade, identification of key target markets, price evolution, importance of organic and Fairtrade certification, and membership in producer associations.

Four representatives of the main quinoa producer associations (ANAPQUI, AIPROCA, APQUISA, CECAOT) certified by FLO-CERT were interviewed. The associations were selected according to their activities (primary processing, industrialization, internal and external marketing), location, and size, in order to include companies with different characteristics. Seven interviews were applied to representatives of processing and export companies of Andean Valley, Quinoa Foods, and SINDAN Organic in La Paz/El Alto, ANAPQUI and SINAI in Challapata and CECAOT and Real Andina in Uyuni. In parallel, eight interviews were applied to producer associations dedicated to processing and distributing the Andean grain in these cities of Bolivia.

Ten interviews were conducted with representatives of academic and research institutions: a project coordinator from the Foundation for the Promotion and Research of Andean Products (PROINPA Foundation), quinoa experts from the Autonomous University of Tomás Frías, the Technical University of Oruro, and the national coordinator of the Quinoa Program of the National Institute of Agricultural and Forestry Research and Innovation (INIAF). Representatives of the quinoa support sector: The Bolivian Chamber of Exporters of Quinoa and Organic Products (CABOLQUI), the National Council of Quinoa Traders and Producers (CONACOPROQ), the representative of Fairtrade International in Bolivia, the AUTAPO Foundation (FAUTAPO), a certification body (BOLICERT), Mundo Orgánico and the commercial promotion agency (PROMUEVE BOLIVIA) were also interviewed.

Finally, fifteen interviews were conducted with conventional and organic quinoa producers to understand the details of quinoa production systems. A focus group was held in Uyuni, Bolivia, with some of the farmers interviewed, to expand the knowledge of quinoa production systems and complement the information gathered (Trinidad *et al*., 2021; Vaca-Pardo and Reyes-Hernández, 2021).

Participatory observation was carried out in La Paz to collect data by recording presentations and dialogs, taking photographs, and systematizing the information gathered. Participation took place in several meetings, such as the Trademark of Bolivian Quinoa and Designations of Origin, World Fair Trade Day, and Workshop on Building a Communitarian Approach for Social Solidarity Economy and Seal of Approval for Fair Trade, providing additional information on the quinoa sector.

Information obtained from interviews with producers, key informants, and executives was transcribed and examined through content analysis. The content of the interviews was analyzed using ATLAS. Ti 7.5.10. This program facilitates the management and analysis of audio, graphic, and text-based data, such as interview transcripts, to illustrate relationships and create networks through user-assigned settings (codes, notes, quotes).

Because financial data reveals confidential information, which companies safeguard for competitive purposes, the interviewees could not always disclose precise financial data. The unavailable data was complemented by information from available secondary data.

Based on the information gathered from secondary sources (scientific papers, official statistics and production reports at the regional level), a process of information triangulation was carried out (Benavides and Gómez-Restrepo, 2005; Reyes-Hernández *et al*., 2013; Formi and De Grande, 2020). Triangulation is a procedure that consists of verifying and comparing information obtained through different data collection methods in order to validate, broaden, and deepen the understanding of information obtained

through qualitative research techniques.

A first draft map was created as a visual representation of the value chain, illustrating actors, functions, operations, links and distribution channels as a first overview of the scope of the chain behavior. A distinction was made between conventional, organic, and Fairtrade quinoa. In order to identify actors, operations, and links within the chain, an economic analysis was carried out on the prices paid and the percentage of the value received from each link (GTZ, 2007).

RESULTS

Production systems and certification

The quinoa production process involves preparation of soil, sowing of seeds, implementation of conventional or integrated pest management, weeding, harvesting, and post-harvest activities, such as threshing, sifting, and winnowing (varying from manual operations to mechanized technology). The production system can be conventional, organic, or Fairtrade certified. Farms are small-scale (up to five hectares), medium-sized (6–19 ha), or large-scale (more than 20 ha) (Figure 2).

Associations of quinoa farmers have emerged in order to achieve organic certification collectively and to consolidate export markets. This process has been accelerated by implementing projects to enhance market access for organized small-scale farmers through a bilateral productive collaboration with buyers. In this context, associations provide support for product improvement and offer technical assistance and administrative training programs to their affiliated farmers.

The certification process includes application, inspection, and accreditation. Organic certification costs depend on the area to be inspected, the number of products and processes, distance between plots, and related accessibility. The soil is certified rather than the grain; however, samples are taken of the crop (plant and seeds). The transition from conventional to organic production systems requires at least three years before crops are organically certified. In the meantime, crops can be sold as transitional or conventional, but not as an organic product.

Certified goods originating from farmer cooperatives only guarantee certification within the association and are not valid for individual producers. In many cases, export companies pay collective certification costs for their affiliated farmers, so they become the owner of the certification. Therefore, the producers have a commitment to sell the product to the company. The total costs are around USD 1,701, plus the respective accommodation and transport expenses incurred by the inspector.

Figure 2. Cultivation of quinoa on a medium-scale farm, harvesting and cleaning of quinoa in La Paz, Bolivia. Source: Nadine Stöcker.

The legal regulations are set by the Association of Ecological Producer Organizations in Bolivia (AOPEB) and the National Service for Agricultural Health and Food Safety (SENASAG). Since 2012, these certifications have been recognized as equivalent in Europe and US markets (USDA, 2015). The leading accredited independent certifying companies are Boliviana de Certificación (BOLICERT), (BIOLATINA), Certification of Environmental Standards (CERES), and IMOcert Latinoamérica Ltda (IMOcert).

There are more than 70,000 quinoa production units in Bolivia, but only around 3,500 are affiliated with the leading associations. The National Association of Quinoa Producers (ANAPQUI) is the largest independent association certified by FLO-CERT. It generates an annual production volume of more than 3,640 tons. Around 80% of the affiliated farmers possess the Fairtrade certification (FLO ID 3658). The Salinas Association of Quinoa Producers (APQUISA), certifies and holds the Fairtrade label

(FLO ID 5300), representing a legally established community-based non-profit company of royal quinoa producers. Currently, it includes more than 400 affiliated farmers, located in the Southern Altiplano.

The Central Cooperativa Agropecuaria Operacion Tierra (CECAOT) encompasses 14 producer cooperatives, with more than 450 members. It covers organic and Fairtrade certification in collaboration with a French Fairtrade group (ETHIQUABLE). The Association of Organic Producers Capura (AIPROCA) holds the Fairtrade certification for 40 members (FLO ID 26592) under an agreement with SINDAN Organic. SINDAN Organic provides a guarantee for AIPROCA to obtain credit from national banks and offers pre-financing payment.

Processing and export companies

Private profit-oriented enterprises entered the Bolivian quinoa market in 2000. The trading companies buy the product from individual producers or organized small farmers to process, transform, and sell it on the national or international market. Producers sign a contract with the companies as suppliers, with terms determining purchase volume, time, and price.

The enterprises provide technical assistance and offer to finance the introduction of organic certification systems to farmers. Thus, the enterprise is considered the owner of the certificate. Many companies prefer to collaborate with a limited number of producers who provide them with the required quantity of raw material to be processed and transformed at their plant facilities.

The Bolivian Chamber of Quinoa and Organic Products Exporters (CABOLQUI), founded in 2005, exports almost 60% of Bolivian organic quinoa. The chamber comprises a group of nine companies oriented towards processing, transformation, and export. CABOLQUI aims to establish long-term cooperation, increase production and employment in the quinoa sector, and open new markets.

The supply chain of Bolivian quinoa includes five importers of organic and Fairtrade certified quinoa. The Gesellschaft zur Förderung der Partnerschaft mit der Dritten Welt mbH (GEPA), the most prominent European non-profit Fairtrade organization, acquires the product from ANAPQUI. ETHIQUABLE purchases from CECAOT. Rapunzel Naturkost GmbH obtains the product from ANAPQUI. Eco Terra GmbH and Ziegler & Co. GmbH purchases quinoa from APQUISA.

Brokers have an essential role as intermediaries between exporters and importers within the quinoa supply chain. Their functions include establishing trade contacts and supporting activities related to import and export. The brokers receive economic compensation by commission (a determined percentage of the traded value), which the importer pays.

In 1998, ANAPQUI and CECAOT had a market share of almost 80% of total Bolivian quinoa exports. Recently, they have lost their former monopoly position in the quinoa trade due to the establishment of private companies. In a highly competitive situation, the organizational structure of the supply chain has become more complex. In addition, the associations have faced higher barriers to entry due to a sharp increase in the quality requirements of the target groups.

Distribution, export and transport distribution

Challapata is the main collection center for bulk quinoa grain in South America, and the national quinoa price is determined here. Desaguadero, El Alto, Oruro, Uyuni, as well as Caracollo and Patacamaya in Peru are other smaller collection points. Many Peruvian wholesalers export purchased quinoa from Challapata to Peru via the overland route to Desaguadero. The quinoa price at the Challapata market is generally lower than the amount remunerated by producer associations or private companies.

Non-associated quinoa producers sell either to private companies or intermediaries. These middlemen cooperate with enterprises and wholesalers and distribute the product to the markets in Challapata and Desaguadero. Bolivian quinoa traded in Desaguadero is distributed on the Peruvian market or sold on the international market as Peruvian quinoa. Many wholesalers buy unprocessed quinoa at the Challapata market to complete large export orders and sell it to the domestic market (Figure 3).

Producer associations and private companies carry out the functions of collection, processing, and industrialization. Quinoa is sold either to a broker or directly to an importer. However, organizations and many enterprises cannot purchase the entire production from their affiliated farmers due to low market demand (the sales volume is smaller than total production).

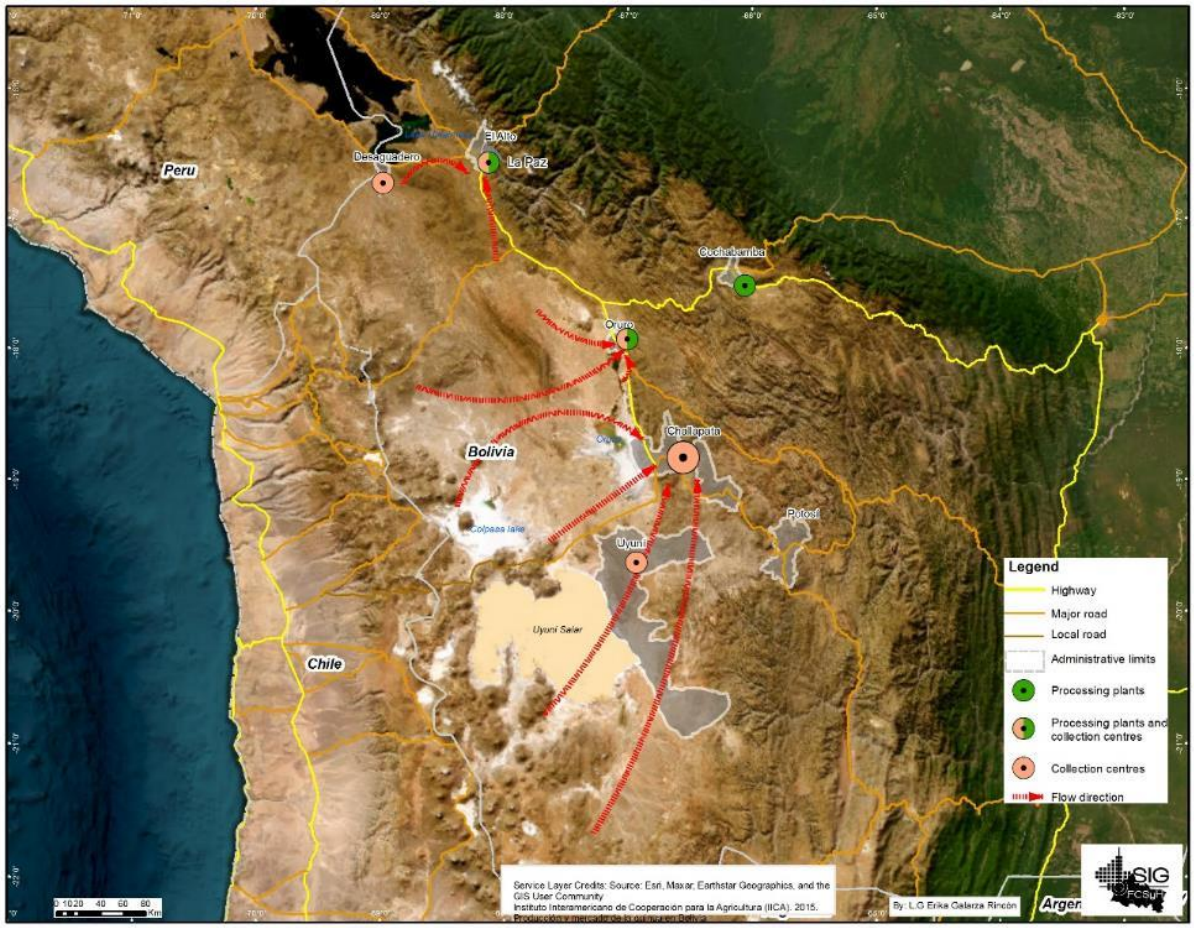

Figure 3. The flow of quinoa to collection centers and processing warehouses in Bolivia. Source: Nadine Stöcker, 2016.

Most of Bolivia's quinoa (98%) is exported through the Chilean port of Arica, with the rest going through the ports of Iquique (Chile), Desaguadero (Peru), Pocitos and Concepción (Argentina). Less than 1% is transported by air. The producer association and the exporting company pay for transportation to the shipping point (Arica), including customs and port fees for loading the containers onto the ship. The timing of export operations depends on the volume, processing time and logistical handling of the company. In general, the collection, transportation, processing, industrialization and packaging takes seven to ten days. For organic production, after processing, one sample per order is taken and sent to a European laboratory, which generates an additional cost of USD 600.

The distance between industrial sites (e.g., in El Alto) and Port Arica is approximately 500 kilometers. Transportation costs range from USD 1,000 to 1,400 per container, including customs fees. It usually takes seven days, depending on truck loading, traffic volume, and border control. However, the shipment can be delayed and take up to twice as long when the port is closed due to tides or adverse weather conditions. Shipment costs range from USD 2,000 to 2,500 per container, plus cargo insurance (USD 300 per container). Free on board (FOB) origin covers the total cost for maritime transport from Arica to the destination port as well as transport insurance. It also covers the unloading of the containers from ship and transportation to the importer's warehouse. Quinoa Foods sells to European importers on FOB Hamburg terms.

Most producer associations and exporters choose open account transactions as their method of payment, it means that the importer settles the order after receipt (30 to 90 days). The buyer of Fairtrade certified quinoa is required to pay the farmer 60% of the purchase price in advance after signing the contract and at least six weeks before shipment. The remaining 40% is paid within 30 days of receipt of the documents confirming ownership.

Production cost

The cost of a quintal (approximately 46 kg) of

Bolivian quinoa can vary depending on location, product quality, and market conditions. In 2016, the market price for quinoa was BOB 350 per quintal (USD 50), which is almost 75% lower than in 2014, when a quintal sold for an average of BOB 1,360. Currently, the price varies between BOB 300 and BOB 600 (USD 43-86). The current price does not allow farmers to cover their production costs. Although production costs vary depending on the production system (traditional, semi-mechanized or mechanized and conventional or organic), producers need at least BOB 600 per quintal to cover their production costs.

Associations buy organic quinoa from their member farmers at a higher price than private companies. ANAPQUI, for example, pays BOB 725 per quintal to its members (BOB 25 is a regional producer bonus). The average purchase price (associations or private companies) of BOB 503 per quintal (USD 72.6) is higher than the current market price in Challapata, which is BOB 350 per quintal. Prior to the pandemic situation in the world, the export price of quinoa, in total, varied between USD 2,240 and 2,500 per ton.

The current minimum Fairtrade price for organic quinoa is USD 2,600 per ton (2024). However, only SINDAN Organic has set a higher price, while ANAPQUI did not provide organic export prices. Farmers receive a Fairtrade premium of USD 260 per ton, which is charged to the importer. SINDAN Organic purchases organic quinoa at USD 1.57/kg to offer it at an export price of USD 2.3/kg (organic) and USD 2.7 (organic and Fairtrade).

Based on data collected during the fieldwork and calculated using FLO-CERT, the cost of the initial and annual certification fees for ANAPQUI was USD 6,721 and USD 4,338, respectively. The estimated certification fees are for the first twelve months and are paid prior to the audit. Thereafter, a three-year certification cycle begins, with annual audits. This example shows that the annual certification costs are approximately 35% less than the initial fees. Failure to pass a regular audit will require a follow-up audit at an additional fee of USD 358 per day (including travel and reporting days) plus travel expenses.

Transportation costs within Bolivia are a maximum of USD 70 per ton plus port charges, while calculated shipping costs are approximately USD 125 per ton plus transport insurance. Thus, domestic and international transportation costs account for approximately two percent of the total retail price. The retail mark-up accounts for half of the net selling price, while production costs account for only about 15%. This calculation does not consider the Fairtrade minimum price for organic quinoa and the additional incentive (USD 260 per ton).

DISCUSSION

In the Bolivian Altiplano, there is a high variability of quinoa genotypes adapted to local conditions (Vargas *et al*., 2019). According to official data, the area under quinoa cultivation in 2023 will be more than 126,287 ha (INE, 2024). However, quinoa production and specialization in the quinoa real are becoming increasingly intensive. This intensification has led to soil degradation and an increase in monocultures (Lozano *et al*., 2012; Medrano and Torrico, 2015; Cárdenas *et al*., 2015). Such a situation has encouraged the development of unsustainable practices that have led to water scarcity, reduced soil fertility, excessive food waste, and inefficient use of natural resources, similar to other crops in the world (Ortiz Gutiérrez *et al*., 2021).

Quinoa is an example of a previously unknown product that has only been recognized by consumers from industrialized nations through organic and Fairtrade certification (Carimentrand and Ballet, 2010). Consequently, development of cooperative structures is essential for the introduction of farmers to the Fairtrade system, however, not all members share the benefits (Stöcker, 2016).

The commercial system of Bolivian quinoa includes several intermediaries, contrary to the mission of Fairtrade. The quinoa value chain is highly buyer-driven, meaning that retailers from the target markets control it through certified organic and Fairtrade quinoa. As with most organic farmers around the world, quinoa farmers are required to meet the requirements to be certified (Laguna, 2008; Blajos *et al*., 2014).

The entry of companies into the Fairtrade market as new suppliers of certified quinoa would increase competitive pressure within the network (Carimentrand and Ballet, 2010). However, in terms of participatory mechanisms for representative democracy, the affiliated quinoa farmers are hardly integrated due to a lack of coordination and communication within the association, similar to other cases (Ríos-Guayasamin *et al*., 2016).

Individual interests in the organization weaken collective interests and allow a few people to control the association, which is not in line with Fairtrade standards for small producer organizations, where democracy, participation and transparency are important factors (Fairtrade International, 2021). We postulated that companies perceive farmers as suppliers of raw materials rather than as an integral part of the company and therefore governance

practices are almost non-existent (Ribeiro-Duthie *et al*., 2021b).

Fairtrade contracts and agreements are signed with associations or companies rather than individual farmers, and the cost of certification is borne by the exporting companies or producer associations that hold the certificate. The high cost and effort of certification is prohibitive for individual farmers, perpetuating the dependency on third-party certification by private label institutions (Cáceres *et al*., 2007; Laguna, 2008). Certified companies often do not purchase the entire production, forcing farmers to find other distribution channels and sell the remaining quantity as conventional quinoa (Laguna, 2011).

This may explain why the role of intermediaries is perceived as dual. On the one hand, intermediaries provide services such as collection and transport to trading points, have an extensive network and connections in the quinoa business, and can buy small quantities. In addition, many intermediaries buy conventional grain and therefore do not require certification or compliance with quality requirements. On the other hand, intermediaries use their growing market power to influence quinoa prices in markets such as Challapata (Schneider, 2014).

Export prices are based on the current market price, although global supply and demand dynamics are also reflected in the price level. In general, the Fairtrade market offers higher prices than conventional and organic quinoa exports (Tschopp *et al*., 2018; Alandia *et al*., 2020). The Fairtrade minimum price for organic quinoa is higher than the export price for organic quinoa, which is approximately $2,250 per ton (Fairtrade International, 2021). Fairtrade-certified farmers recognize that alternative trading practices generate an average economic benefit of about 20%.

However, several critics have questioned whether Fairtrade can achieve its intended goals (Anderson, 2019). Quinoa is a product that would not be suitable for the Fairtrade concept due to several shortcomings in the certification system and minimal benefits and economic gains (Dragusanu *et al*., 2014; Stöcker, 2016). This means that the development of Fairtrade is more of an economic trend than a growing consumer awareness.

According to AIPROCA, the unequal distribution of power is based on the buyer-driven commodity chain and demonstrates the weak bargaining position of farmers. Many local producers would prefer to sell their products directly to importers, but they are mostly individual and geographically dispersed, with limited access to processing facilities and distribution channels. In addition, producers are seeking permission to export unprocessed quinoa.

According to the INIAF interviewee, price instability only occurs in producer countries. In contrast, retail prices in the target markets remain quite stable. Unequal distribution of profits and lack of transparency along the supply chain, as well as long-term contracts with importers, explain internal pressures among exporters (Schneider, 2014; Angeli *et al*., 2020). Quinoa producers believe that an increase in demand will lead to an increase in prices. Despite price fluctuations, they still receive a relatively large share of the export price compared to other products.

ANAPQUI members currently receive about 23% of the retail price for processed organic Fairtrade quinoa. ANAPQUI's purchase price is set at USD 1.43 per half kilo, while GEPA's retail price is more than four times higher at USD 6.15. The retailer receives a proportionally higher share of the profits. The retailer sells quinoa from GEPA, so there are no additional costs for processing or repackaging. Nevertheless, the retail price is more than a third higher than the price set by GEPA, which represents a maximization of profits at the expense of the fair trade concept.

Although traceability is closely linked to Fairtrade's organic production systems and practices, action is unilateral along the supply chain and transparency is only addressed to consumers (Carimentrand and Ballet, 2010; Dragusanu *et al*., 2014; Ribeiro-Duthie et al. 2021a; 2021b). Many associations stated that they receive limited information about the distribution channel of their product once it has left Bolivia.

Fairtrade seems not to be an effective tool for reducing social inequalities among quinoa producers. Marginalized farmers are often not members of Fairtrade organizations, because they cannot afford the cost of certification, therefore are automatically excluded from the system. Quinoa could not be considered a traditional Fairtrade product like coffee or cocoa because the grain is closely linked to the idea of food sovereignty in the Bolivian Andes, making it a special case due to its historical background and traditional consumption in the Andean region (Dragusanu *et al*., 2014; Herrera Miller, 2016; Ribeiro-Duthie et al. 2021a; 2021b).

The small quinoa producer and the quinoa market face two challenges. The first lies in the fact that Bolivia is a landlocked country, which makes it completely dependent on the ports and maritime infrastructure of its neighboring countries, especially

the Chilean ports of Arica and Iquique. In addition, national cargo is given priority in these ports, so Bolivian maritime cargo will be delayed in the event of port delays or closures. In addition, importers may charge a contractual penalty fee if there is a delay in delivery (Stöcker, 2016). The second is Peru's commercial competition. Productivity in Peru is three times higher than in Bolivia, and production costs are significantly lower because farmers are more efficient (Alandia et al. 2021; 2020). In the last decade, Peru has expanded its acreage, focusing on large-scale production of conventional quinoa (Angeli *et al*., 2019).

Additionally, Peruvian intermediaries introduce conventional quinoa to Bolivia and sell it as organic at low prices. Other intermediaries enter the Bolivian market to buy quinoa real ―which grows only in the country's southern Altiplano― and offer the grain in international markets as if it had been harvested in Peru (Stöcker, 2016). The Bolivian institutions have called for the introduction of sanctions and mechanisms to combat illegal cross-border trade.

ANAPQUI, CABOLQUI, CECAOT, CONACOPROQ and FAUTAPO support the creation of a protected designation of origin for Bolivian quinoa). The Center for the Promotion of Imports from Developing Countries supports this process to differentiate Bolivian quinoa from that of other countries (CBI, 2022). Bolivia would have the exclusive right to use the registered and protected name "quinoa real," which guarantees specific quality standards and authenticity. However, Peruvian farmers have also applied for the designation of origin (IICA, 2015b). It is only a matter of time before one nation achieves this monopoly based on the protected designation of origin.

Participatory Guarantee Systems (PGS) could be considered as an alternative certification system for quinoa producers. This initiative is a more appropriate, cheaper, and less bureaucratic alternative to the traditional certification process. Other additional benefits include the empowerment of small farmers (Kaufmann and Volg, 2017). PGS could improve direct trade relationships between producer associations, exporters, and importers, such as ETHIQUABLE, GEPA, and Rapunzel. The Small Producers' Symbol (SPP) could be another option. It was launched in 2010 to address the lack of focus on smallholder farmers in current Fairtrade standards (ITC, 2015). The label is embedded in an independent certification system and is owned by smallholder farmers from developing countries, represented by the Foundation of Organized Small Producers. The SPP is based on the principles of sustainability, social justice and solidarity. Under this approach, the size of the production unit in agriculture is limited to 15 ha in order to avoid large-scale operations (Pruijn, 2016). The certification is accepted in countries such as Canada, the United States and the European Union. Compared to Fairtrade certification fees, the implementation costs for SPP are significantly lower.

CONCLUSIONS

The Bolivian organic Fairtrade quinoa value chain involves several intermediaries, similar to the conventional trade, therefore, quinoa is a product that is not currently suitable for the Fairtrade concept due to several shortcomings in the certification system and the minimal benefits and economic returns. It draws attention to the fact that the process of obtaining organic certification is inherently time-consuming and costly for farmers, who are unable to bear the financial burden independently. Consequently, they are compelled to pursue collective certification or to sell their products to certified companies and organizations. In addition, the lack of coordination between Fairtrade supply chain actors and producers has limited access to better prices and distribution channels. Companies perceive farmers as suppliers of raw materials rather than as an integral part of the company, and therefore governance practices are scarce. The almost non-existent governance structures imply that most decisions are based on the buyer-driven commodity chain, demonstrating the weak bargaining position of farmers. Most producers would prefer to sell directly to importers, but they are mostly individual and geographically dispersed, with limited access to processing facilities and distribution channels. Small quinoa producers and the quinoa market is facing two significant challenges: he country's landlocked status and intense commercial competition from Peru. An alternative certification for quinoa, such as the Small Producers' Symbol (SPP), is an independent certification system based on the principles of sustainability, social justice, and solidarity. In comparison to the costs associated with Fairtrade certification, the significantly lower costs could prove to be a significant development.

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