

Benefits of CSR Through Quinoa Biotrade in South American Communities

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Abstract: In recent years, the demand for organic, native products with high nutritional value, that do not contain any type of chemicals or preservatives and that have a certification, has increased. On the other hand, the sustainable development of companies, producers and agricultural areas do not keep pace with this growth. At the same time, companies have begun to make efforts to improve their corporate image by carrying out activities for the benefit of the communities. The main objective of this research is to identify what is known about the benefits of Corporate Social Responsibility (CSR) through the biotrade of quinoa in South American communities in the scientific literature between the years 2010 to 2020. In addition, it specifically focuses on the importance of CSR in quinoa-producing communities and the benefit of Fair-Trade certification in the populations. This way, the models and strategies found can be replicated in the future. Therefore, a systematic review of the literature was carried out, where information was collected on the CSR and Fair-Trade variables following the PRISMA statement (identification, screening, eligibility and included). For which four databases were used, such as: Redalyc, Ebsco, Google Scholar and Scielo; Finally, under the inclusion and exclusion criteria, 22 scientific articles were selected for this work. The results obtained show that companies that incorporate CSR have better management and a positive impact on the community, in the same way, fair-trade improves the quality of life of the producing community and provides environmental benefits. Finally, The research concludes that CSR through the biotrade of quinoa allows development and progress of the producing communities in South America, improving aspects of education and increasing jobs; at the same time, it generates value and increases the image of organizations. More studies focused on CSR in specific communities and the analysis of their adaptation to the context of the pandemic are recommended.

Keywords: Biotrade, communities, CSR, quinoa

1. Introduction

In recent years, quinoa, also called the "sacred grain of the Incas", has been gaining consumers worldwide and even more so on the European continent; being the main producing area the province of San Román in Puno-Peru. Quinoa is an Andean grain with high nutritional value originating from the Altiplano (Peru-Bolivia) and that for more than 5000 years has been part of the diet of the inhabitants of the high Andean areas of ancient Peru, Bolivia, some areas of Ecuador, Chile and Argentina (Ministry of Culture and Irrigation [MINAGRI], 2017). The main European countries such as: France, United Kingdom, Italy and Germany are the ones with the highest consumption in terms of organic products, for this reason the demand for these products grows exponentially. Likewise, the new generation of consumers values organic products more and are willing to pay more money for organic and quality products (Córcega Sutta and Machaca Lima, 2018).

In this context, Fair-Trade is important since it will allow a commercial relationship on good terms, with transparency, trust and respect between the consumer and the producer, benefiting the sustainable development of producers (Laguna, 2008). In addition, with globalization, the production and commercialization process must have optimal management in the value chain process, where all the agents that intervene are well defined and interconnected, since currently value chains are not being established in a standardized way (Inocente Vera and Lara Baldeón, 2019). There are environmental indicators for various crops such as cocoa or coffee, but there is no evidence of research work on quinoa crops that serve as a guide to identify relevant indicators in production and in the increase in crop area in recent years (Pinedo Taco, Gómez Pando and Julca Otiniano, 2017).

Therefore, biotrade is presented as a recent business model that includes marketing products from regions with great biodiversity, allowing to protect and give value to biological resources, and reduce poverty and inequality of rural populations (Lupaca Nina, 2018). Also considering that the vast majority of companies

globally are focusing on Corporate Social Responsibility (CSR), which is a strategy to promote the development of a community, raise awareness and give companies another direction; at the same time, it generates value and improves its corporate image in the community (Laura Castillo, 2017). For all of the above, the general problem of the research is: What is known about the benefits of CSR through the biotrade of quinoa in South American communities in the scientific literature between the years 2010 to 2020? In addition, the specific problems identified are: how important is CSR in the quinoa-producing communities? And what benefit does the Fair-Trade certification bring to the quinoa-producing communities? Bearing in mind that one of the problems that the quinoa producer associations have had, has been the drop in quinoa prices due to the use of pesticides in the production areas, receiving the denial of their entry into various international markets and causing a decline in the economy of quinoa producers in Puno (Limache Yanque, 2018). Therefore, the main objective of the research is to identify what is known about the benefits of CSR through biotrade of quinoa in South American communities in the scientific literature between the years 2010 to 2020. The specific objectives are to identify how important is CSR in the quinoa-producing communities and to present the benefits that Fair-Trade certification brings to quinoa-producing communities.

2. Methodology

The present investigation corresponds to a systematic review of the literature, carrying out an exhaustive analysis based on different research articles, the results obtained were disclosed in a descriptive manner. The PRISMA protocol was used, which "focuses on the ways in which authors can ensure transparent and complete reporting of reviews and meta-analyses" (Liberati et al., 2009, p. 2). Four databases were used among them: Redalyc, Metasearch - Ebsco Discovery (UPN-Universidad Privada del Norte), Google Academic and Scielo. For a detailed search of information, the following terminologies were defined for each database: Redalyc ("exportable demand" and "quinoa biotrade"), Metasearch - Ebsco Discovery (UPN) ("sustainability" and "quinoa biotrade"), Google Scholar ("quinoa biotrade", "social responsibility" and "sustainability") and Scielo ("quinoa biotrade"). The inclusion criteria were defined by databases and search engines: scientific articles, theses, research books, Spanish and English language, and a maximum time range of 11 years old (2010-2020), with the exception of one article from 2008 that gathered interesting data for research. The exclusion criteria were media and sources of information that do not belong to the established time range, research articles that do not present a research methodology similar to ours, and articles with irrelevant information. In the first search phase, 467 articles were obtained, applying the inclusion criteria for analysis, a total of 41 articles were obtained, of which 22 scientific articles were finally included in the investigation, 5 articles from Redalyc, 2 articles from Metasearch - Ebsco Discovery (UPN), 14 articles from Google Scholar and 1 article from Scielo, respectively (Figure 1).

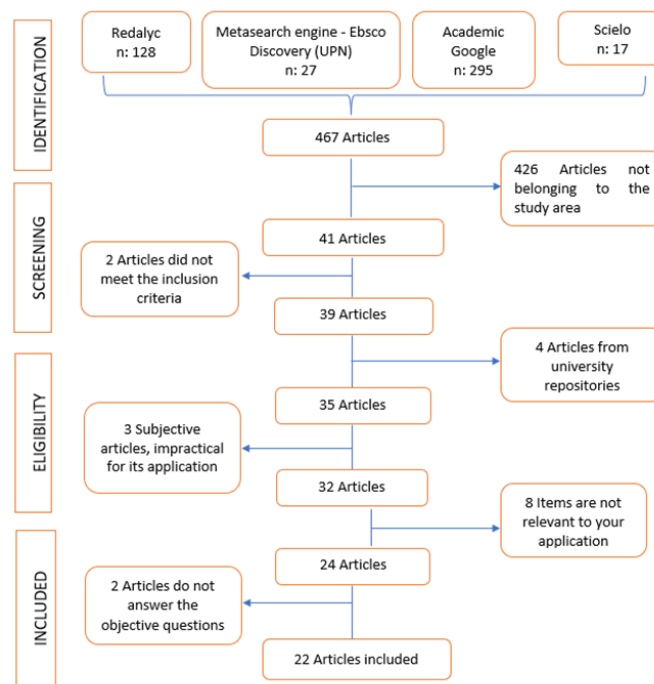


Figure1: Systematic review flow diagram (original elaboration)

3. Results

22 scientific articles were selected for this research, these were ordered and distributed in blocks for a better understanding according to the Author, Title, Database, Country and Approach.

Table 1: Total articles included in the review according to the keywords used

Author and Year	Qualification	Database	Country	Approach
Aguilera Castro and Puerto Becerra (2012)	Crecimiento empresarial basado en la Responsabilidad Social	Redalyc	Colombia	The article addresses issues of corporate social responsibility, contrasting with the reality between the company and the community, and its growth.
Balboa Urbano (2019)	Consortios de exportación: empresas productoras de quinua en San Román, Puno	Academic Google	Peru	International demand for quinoa and its impact on export consortia formed as quinoa producers.
Barreto Rodríguez, Canto Sáenz and Julca Otiniano (2017)	Sostenibilidad ecológica de la producción agropecuaria tradicional de Carhuaz, Áncash, Perú	Academic Google	Peru	Ecological sustainability and traditional agricultural production, making known the productive reality of these peasants and their productivity.
Barrezueta Unda (2015)	Introducción a la sostenibilidad agraria: con enfoque de sistemas e indicadores	Academic Google	Ecuador	Social, economic and environmental approaches, related to the sustainable development of agrarian systems and their indicators.
Bolívar (2011)	Metodologías e indicadores de evaluación de sistemas agrícolas hacia el desarrollo sostenible.	Academic Google	Venezuela	Evolution of sustainable agriculture and its contrast with the usual performance of agricultural communities and their projected level of performance. As well as social programs and strategies that support sustainable development.
Cáceres Chávez and Loayza Díaz (2016)	Comercialización de Quinoa Negra Orgánica vía Comercio Justo	Academic Google	Peru	Quinoa productivity, external factors, evolution and trend. Likewise, it proposes the study of the market regarding exports to the European market and the fair market.
Jiménez, Cárdenas and Soler-Tovar (2017)	Biocomercio en el contexto suramericano: Colombia y Perú como estudios de caso	Scielo	Colombia	Sustainability of biotrade resources and the development of strategies that generate greater benefits for local communities.
Chura Javier and Apaza Mamani (2019)	La gestión empresarial en las cooperativas Exportadoras de Quinoa en la Región Puno en el año, 2019	Academic Google	Peru	Demand for quinoa for export in the international market, as well as the business management of these cooperatives made up of farmers.
Córcega Sutta and Machaca Lima (2018)	Plan de negocios para la comercialización de Quinoa orgánica de la provincia de Caylloma con Certificación de comercio justo al mercado alemán.	Academic Google	Peru	Market studies for the commercialization of quinoa in the international market, taking into account its development and production.
Cruz, Joffre and Winkel (2015)	Racionalidades campesinas en los Andes del Sur: reflexiones en torno al cultivo de la quinua y otros cultivos andinos	Academic Google	Argentina	Social and environmental factors that influence agricultural production in the communities, as well as the sustainability of its production to market it in the foreign market and the benefit it generates.

Author and Year	Qualification	Database	Country	Approach
Gutiérrez Ríos and Surco Ocas (2020)	Efecto positivo del Comercio Justo en la comunidad puneña con respecto a las exportaciones de quinua hacia Francia, dentro del marco de vigencia del Acuerdo Comercial entre Perú y la Unión Europea, durante los años 2008 – 2018	Academic Google	Peru	It refers to the positive effects obtained by the quinoa export trade, an article that covers issues of sustainability and impact, important for its use.
Guzmán Bautista (2013)	Competitividad de la quinua perlada para exportación: el caso de Puno	Redalyc	Peru	Exportable offer of quinoa, analysis of Porter's 5 forces, relevant to the investigation for its complete analysis regarding the export of quinoa.
Inocente Vera and Lara Baldeón (2019)	Análisis de la cadena de valor de las empresas exportadoras de quinua orgánica de Puno a fin de aumentar su competitividad al mercado alemán del 2012 al 2017	Academic Google	Peru	It covers issues of exportable supply of quinoa, making an analysis of the value chain and its efficiency with respect to exporting companies and their supply.
Pinedo Taco, Gómez Pando and Julca Otiniano (2017)	Indicadores de sostenibilidad de sistemas de producción de quinua en Chiara, Ayacucho	Ebsco	Peru	It deals with qualitative and quantitative indicators related to the economic-social aspects of the production and commercialization of quinoa. Likewise, it reveals the degree of sustainability that they generate towards these producing communities.
Laguna (2008)	Grano pequeño, mercado pequeño, grandes apuestas: estudiando los límites de la regulación estatal francesa del comercio justo a partir del caso de la quinua	Academic Google	Bolivia	It understands the reality of the production and commercialization of quinoa in the market, as well as its importance and transparency on the part of the communities that transcends in its impact.
Laura Castillo (2017)	La responsabilidad social empresarial para alcanzar la ventaja competitiva de los productores de quinua de la provincia de San Román, periodo 2013 - 2014	Academic Google	Peru	Corporate social responsibility and the relationship it has with the benefits received by quinoa producers.
Limache Yanque (2018)	Análisis del proceso de exportación y su incidencia en la comercialización en el mercado internacional de los productores de quinua en la región puno, periodo 2014 – 2015	Academic Google	Peru	Analysis of exportable supply and its impact on quinoa with respect to its production and sustainability.
Lupaca Nina (2018)	El biocomercio de la quinua en el mercado global y sus efectos en los agricultores locales en Perú. Estudio de caso:	Academic Google	Peru	The impact of quinoa biotrade on farmers. It proposes a complete analysis that studies a group of interest and the benefits they perceive acclimated to their reality.

Author and Year	Qualification	Database	Country	Approach
	Cooperativa Agroindustrial Cabana (COOPAIN) Puno			
Ministry of Culture and Irrigation [MINAGRI] (2017)	La Quinoa: Producción y comercio del Perú. Lima: Dirección de Estudios Económicos e Información Agraria	Ebsco	Peru	Production and marketing of quinoa for export in the international market, an analysis of the production situation of agricultural communities from their own reality.
Pinedo Taco, Gómez-Pando and Julca-Otiniano (2018)	Sostenibilidad de sistemas de producción de quinua (Chenopodium quinua Willd.)	Redalyc	Peru	Sustainability and production of quinoa, an analysis of both local and international demand. It exemplifies the impact that commercialization has on producer communities.
Chirinos Araque and Pérez Peralta (2016)	Responsabilidad Social Universitaria: Emprendimiento sostenible como impacto de intervención en comunidades vulnerables	Redalyc	Colombia	Design and creation of social responsibility programs towards communities and their development. It supports the importance of social responsibility and its application.
Volpentesta (2012)	Las acciones sociales en empresas con responsabilidad social	Redalyc	Argentina	Corporate social responsibility and the activities carried out. Impact generated by the projects in the communities or interest groups.

3.1 Benefits of Corporate Social Responsibility-CSR through biotrade of quinoa in South American communities in the literature of the last 10 years

To answer the main research question, it is important to know what is meant by CSR and its application. Aguilera Castro and Puerto Becerra (2012) indicate that CSR is a new alternative to "compete", based on transferring added value to society and hoping that in the medium or long term it will become a source of competitive advantage. In this way, companies and/or legal entities allocate part of their resources to the benefit of the community, generating a benefit for both parties in a given time, which can be understood as a development and growth option for the company, facing the competition and high levels of oversupply, as for society.

Regarding the application of CSR, it can vary according to the objectives of the companies; in the research process, it was possible to verify the efficiency that it had in relation to its objectives and activities with the communities, understood as a shortage in the integration of CSR in its constant actions.

However, it is worth mentioning that these CSR projects not only generate an impact in the communities, since they serve as a support and innovation system for many universities; generating social responsibility and sustainability projects aimed at different communities. In such a way that the vision of sustainable entrepreneurship must be included in the framework of university social responsibility since it will allow the creation of strategies, provide value to human beings and at the same time encourages a better use of advanced technological resources and own production adapted to the requirements of the environment (Chirinos Araque and Pérez Peralta, 2016). Becoming an inspiring model that serves for research and entrepreneurship; providing the necessary tools to obtain much more favorable results.

3.2 Importance of Corporate Social Responsibility-CSR in quinoa-producing communities

The research revealed that those companies that do present strategies linked to the mission and vision of CSR notably demonstrate better management and a positive impact on the community. "In these companies the predominant idea is that carrying out actions in the social field means a real opportunity to generate processes of change and recovery of capacities of those who are their beneficiaries" (Volpentesta, 2012, p. 10).

According to the analysis obtained by the selected articles, they place great emphasis on the positive impact on these agricultural communities; as in the case of COOPAIN Cabana, leader in the production of organic quinoa in Peru, and where the quinoa producers of Cabana, by forming the cooperative through associative strategies, were able to gain experience, standardize their production from traditional quinoa to organic quinoa and improve their income (Laura Castillo, 2017). Demonstrating that the correct management of CSR strategies, focused on generating better performance and benefit in the communities, produces a positive effect for both, represented as a competitive advantage.

Finally, Lupaca Nina (2018) reveals that "the same peasant exports and has better income, in such a way that it has allowed improving the welfare of the poor peasant farmer and his community, promoting employment and developing a sustainable economy" (p. 59), exemplifying that these strategies positively favor the peasant and his environment.

3.3 Benefit of the Fair-Trade certification to the quinoa producing communities

According to Gutiérrez Ríos and Surco Ocas (2020), fair-trade greatly favors the producing communities that sell products under this certification, since it makes it easier for customers to pay a fair price even compared to a price above the market because they are aware of the quality of the product; it benefits the development of society, to be more precise, the quinoa-producing communities, so there is gender equality both in optimal working conditions and in equal pay between men and women.

In addition, fair-trade by improving the quality of life of the community helps to protect children since it prohibits child exploitation, it also makes the entire process of extraction and production of quinoa friendly to the environment.

The implementation of the fair-trade certification for organic quinoa in the province of Caylloma involved adopting various challenges that were related to the development of care for the environment, good agricultural practices, corporate social responsibility, benefit of the primary needs in the society, forced labor, among other aspects; being the main benefit the opening of new market segments (Córcega Sutta and Machaca Lima, 2018).

Similarly, Laguna (2008) indicates that this certificate generates a competitive advantage for farmers, since they can expand their market and position themselves against large companies.

4. Discussion

Next, a brief argument about the opinions and points of view of the most relevant authors of this research is presented.

The results obtained by Chirinos Araque and Pérez Peralta (2016); and Aguilera Castro and Puerto Becerra (2012) agree that the creation of these CSR projects in the communities generates a long-term benefit. In addition, these not only offer a positive perspective for the community, but also favor the company, providing new research studies that can be replicated in the future by universities.

Regarding the importance of CSR in the quinoa-producing communities, Volpentesta (2012) mentions that it is a great opportunity in the processes of transformation and organizational change, which can affect success if the integration of CSR in its processes is not considered. In addition, Laura Castillo (2017) states that the associativity of processes and resources fosters a beneficial approach for farmers and the community.

CSR in producing communities presents a series of positive results, as mentioned by Lupaca Nina (2018) since these changes have improved the well-being and quality of life in general of the quinoa-producing peasants, promoting the development of their community and employment. In comparison with Laguna (2008) who concludes that Fair-Trade Certificates are of greater importance, since they propose to encourage small businesses and merchants to compete in a more competitive market; becoming an opportunity to face the big companies that intend to monopolize the market with their prices and scale production.

Finally, Córcega Sutta and Machaca Lima (2018) and Gutiérrez Ríos and Surco Ocas (2020) agree on the fact that these certificates not only aim to support farmers to be able to reach the fair market price and promote

gender equality between men and women, but also generate a positive contribution to their environment, since they seek to adopt new measures to take care of the environment and thus achieve a high-quality product. These good practices help merchants to gain a good image in the market and support the CSR projects in their communities.

5. Conclusions

It is concluded that the benefits of CSR through biotrade have significantly improved the quality of life of the inhabitants of the quinoa-producing communities; being reflected mainly in education, since children currently attend schools more frequently, it can also be said at the housing level, that these have had a great improvement, since now more than 80% have access to an electrical network and almost 50% have a good drinking water service.

CSR is very important since it contributes to the development and progress of the quinoa-producing communities, being reflected mainly in achieving greater access to education and basic services, improvements in working conditions and having an equitable participation of men and women in terms of to land production.

On the other hand, the fair-trade certificate allows the quinoa-producing communities in South America the benefit of being able to sell their products at a good price in accordance with the criteria and demands of the market, substantially improving the quality of life of the inhabitants; taking advantage of these certificates directly benefits these producers since it means an improvement in the quality of life and the development of their communities.

Finally, in relation to the research work, it is recommended to use this review as a basis for future research more specifically within the rural communities of Peru, for example, in the community of San Román in Puno, where a large concentration of peasants dedicated to the production of quinoa constituted as a Cooperative. Likewise, investigate the development of CSR through the biotrade of quinoa during the context of the pandemic. The main limitation of the research was that certain research articles were not open access, which prevented full reading for review.

References

- Aguilera Castro, A. and Puerto Becerra, D. P. (2012) "Crecimiento empresarial basado en la Responsabilidad Social", *Pensamiento & Gestión*, No. 32, pp. 1–26.
- Balboa Urbano, D. L. (2019) *Consorcios de exportación: empresas productoras de quinua en San Román, Puno*. Licentiate Thesis. Universidad de San Martín de Porres.
- Barreto Rodríguez, J., Canto Sáenz, M. and Julca Otiniano, A. (2017) "Sostenibilidad ecológica de la producción agropecuaria tradicional de Carhuaz, Áncash, Perú", *Aporte Santiaguino*, Vol 8, No. 2, pp. 219–228.
- Barrezueta Unda, S. (2015) *Introducción a la sostenibilidad agraria: con enfoque de sistemas e indicadores*. Edited by Universidad Técnica de Machala. Machala, Ecuador.
- Bolívar, H. (2011) "Metodologías e indicadores de evaluación de sistemas agrícolas hacia el desarrollo sostenible", *CICAG*, Vol 8, No. 1, pp. 1–18.
- Cáceres Chávez, J. and Loayza Díaz, J. R. (2016) *Comercialización de quinua negra orgánica vía comercio justo*. Master Thesis. Universidad ESAN.
- Chirinos Araque, Y. V. and Pérez Peralta, C. M. (2016) "La responsabilidad social universitaria: emprendimiento sostenible como impacto de intervención en comunidades vulnerables", *Revista Escuela de Administración de Negocios*, No. 81, pp. 91–110.
- Chura Javier, R. and Apaza Mamani, D. Y. (2019) *La gestión empresarial en las cooperativas Exportadoras de Quinua en la Región Puno en el año, 2019*. Bachelor Thesis. Universidad Peruana Unión.
- Córcega Sutta, Y. E. and Machaca Lima, J. A. (2018) *Plan de negocios para la comercialización de quinua orgánica de la provincia de Caylloma con certificación de comercio justo al mercado alemán*. Master Thesis. Universidad ESAN.
- Cruz, P., Joffre, R. and Winkel, T. (2015) *Racionalidades campesinas en los Andes del Sur. Reflexiones en torno al cultivo de la quinua y otros vegetales andinos*. 1st edn. Edited by Editorial de la Universidad Nacional de Jujuy - EDIUNJU. Jujuy, Argentina.
- Gutiérrez Ríos, V. A. M. and Surco Ocas, A. B. (2020) *Efecto positivo del Comercio Justo en la comunidad puneña con respecto a las exportaciones de quinua hacia Francia, dentro del marco de vigencia del Acuerdo Comercial entre Perú y la Unión Europea, durante los años 2008 – 2018*. Bachelor Thesis. Universidad Peruana de Ciencias Aplicadas (UPC).
- Guzmán Bautista, J. H. (2013) "Competitividad de la quinua perlada para exportación: El caso de Puno", *Ingeniería Industrial*, Vol 1, No. 31, pp. 91–112.

- Inocente Vera, D. V. and Lara Baldeón, F. C. (2019) *Análisis de la cadena de valor de las empresas exportadoras de quinua orgánica de Puno a fin de aumentar su competitividad al mercado alemán del 2012 al 2017*. Bachelor Thesis. Universidad Peruana de Ciencias Aplicadas (UPC).
- Jiménez, T., Cárdenas, J. and Soler-Tovar, D. (2017) "Biocomercio en el contexto suramericano: Colombia y Perú como estudios de caso", *Revista de Medicina Veterinaria*, No. 35, pp. 9–15.
- Laguna, P. (2008) "Grano pequeño, mercado pequeño, grandes apuestas: estudiando los límites de la regulación estatal francesa a partir del caso de la quinua", in *3rd Fairtrade International Symposium*. Montpellier, France.
- Laura Castillo, Z. J. (2017) *La responsabilidad social empresarial para alcanzar la ventaja competitiva de los productores de quinua de la provincia de San Román, periodo 2013 - 2014*. Master Thesis. Universidad Nacional del Altiplano.
- Liberati, A. et al. (2009) "The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration", *Journal of Clinical Epidemiology*, Vol 62, No. 10, pp. e1–e34.
- Limache Yanque, R. M. (2018) *Análisis del proceso de exportación y su incidencia en la comercialización en el mercado internacional de los productores de quinua en la región Puno, periodo 2014 - 2015*. Licentiate Thesis. Universidad Nacional del Altiplano.
- Lupaca Nina, N. K. (2018) *El biocomercio de la quinua en el mercado global y sus efectos en los agricultores locales en Perú. Estudio de caso: Cooperativa Agroindustrial Cabana (COOPAIN) Puno*. Master Thesis. Pontificia Universidad Católica del Perú (PUCP).
- Ministerio de Cultura y Riego [MINAGRI] (2017) *La Quinua: Producción y comercio del Perú*. Lima: Dirección de Estudios Económicos e Información Agraria. Lima, Peru.
- Pinedo Taco, R., Gómez-Pando, L. and Julca-Otiniano, A. (2018) "Sostenibilidad de sistemas de producción de quinua (*Chenopodium quinoa* Willd.)", *Ecosistemas y Recursos Agropecuarios*, Vol 5, No. 15, pp. 399–409.
- Pinedo Taco, R., Gómez Pando, L. and Julca Otiniano, A. (2017) "Indicadores de sostenibilidad de sistemas de producción de quinua en Chiara, Ayacucho", *Aporte Santiaguino*, Vol 10, No. 2, pp. 197–210.
- Volpentesta, J. R. (2012) "Las Acciones Sociales En Empresas Con Responsabilidad Social", *Revista Científica 'Visión de Futuro'*, Vol 16, No. 2.