

# QORICHACRA



## IMPACT OF THE PROJECT

CUZCO / PERU 2010-2016

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SUMMARY

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The **Qorichacra** project was developed as a partnership between **Arcos Dorados (AD)**, representing McDonald's restaurants, and the **Syngenta Foundation for Sustainable Agriculture (SFSA)**. It was implemented locally by the **Bartolome de las Casas Center (CBC)** to support the farming communities of the River Quesermayo micro-basin, near Cuzco, Peru, between 2010 and 2015.

The project's objective was to develop a commercial production model involving the construction of greenhouses with appropriate growing technology for vegetable crops that would link small farmers into the supply chain for Arcos Dorados vegetables and other supply chains with rigorous quality standards. It also aimed to improve the lives of farming families and communities. The direct support of SFSA and AD was reduced gradually from 2013 until the conclusion of the project in December 2015.

The first phase of the **Qorichacra** project was carried out with a small group of resource-poor farmers between 2010 and 2012; it organized the farmers and adopted a production system based upon greenhouses, bringing these together into a business model, and established a parallel strategy to improve the quality of housing of the families involved through a series of country contests. The second phase, carried out between 2013 and 2015, consolidated the model and extended it to other communities in the River Quesermayo micro-basin. It developed a technical guide for the construction and use of agricultural greenhouses in the high Andean areas of Peru and managed to improve efficiency overall.



**Site of the Qorichacra Project in the región of Cuzco Micro-basin of the River Quesermayor**

- 22 km from Cuzco (~ 40min)  
Small farmers with experience in growing vegetables
- Access to irrigation and clean water
- Electric power

**Supported communities:**  
Ccorimarca and Sequeraccay (pilot), Huillcapata, Chitapampa  
**Altitude:** 3,700m above sea level

*Photograph taken in September 2016 from the main road with a partial view of the Quesermayo river basin, where the quantity of greenhouses that currently exist can be seen*

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From 2015, the spread of greenhouse technology became more marked through the technical support of CBC and the consolidated resources of municipalities, state projects, international cooperation and the producers themselves. By the end of the project, 24 families were regularly supplying hotels and restaurants in Cuzco; 146 families had improved their dwellings; and as part of the work of promoting better relationships and partnerships with other stakeholders, 468 families had started to plant and grow vegetable seedlings under greenhouses.

In 2015, the Syngenta Foundation commissioned a study of the project to provide information about its impact on the supported farmers and on the farming communities in the surrounding region. The study featured interviews with all the key stakeholders related to the project.

At the end of 2013 (when the pilot phase finished), the total area covered by greenhouses was 6,500 m<sup>2</sup> with 14 greenhouses, producing Iceberg lettuce for the Cuzco McDonald's restaurant. By the end of the project, the total area covered by greenhouses was over 14,000 m<sup>2</sup>.

The success of the production model of high quality vegetables grown under greenhouses was confirmed by the large increase in greenhouses for vegetable and flower production in Cuzco during and after the project, demonstrating the stability and sustainability of the production model promoted by **Qorichacra**.

In the study, interviews with hoteliers and restaurateurs in Cuzco also confirmed the improvement in the supply and quality of vegetables produced and marketed in the region. The introduction of efficient invoicing and deferred payment systems have also helped to achieve the commercial cooperation of retailers, a critical element of the project. Companies supplied directly by farmers have noted significant improvements in product quality. In parallel, public initiatives such as those in the cities of Cuzco, Santiago or San Sebastian, have helped to modernize the sales points in traditional retail markets by improving the choice of hygiene products sold for these premises (such as for floors and tabletops) and in product packaging and handling as well as for customer service. The adoption of good agricultural practices and the direct presence of farmers in the market have helped to strengthen the confidence of buyers and consumers about local product quality. Other companies similar to McDonald's, who are traditionally supplied by products from Arequipa and the coastal areas of the country, are now incorporating locally produced Iceberg lettuce and other vegetables.

The results of the commissioned study have confirmed the positive effect of using greenhouses through increased production volumes and revenues, job creation and the professionalization of farming families involved mainly in vegetables production. Interviews with farmers confirmed that the increase in their income is due to the introduction of the cultivation technology with drip irrigation, good agricultural practices and the use of hybrid seeds that allows them to cope with increasing market demands for higher quality and quantity of products.

The **Qorichacra** model has made small farmers more aware of the potential of their agricultural plots, strategically located close to the city of Cuzco, and they can re-allocate much of their working time to labour that had previously been uneconomic due to inappropriate technology. This is confirmed by the survey data showing that employment has increased in these families, from 0.3 jobs per family with open field production to 1.04 jobs per family producing vegetables in greenhouses.

The project also increased the incomes of directly supported farming families by 131% between 2013 and 2015, of which two thirds came directly from the sale of vegetables and strawberries grown in greenhouses. The increase in sales volume is the main factor, since the prices paid to producers have remained stable between 2013 and 2015, without taking into account seasonal variations.

Meanwhile, income from other agricultural products such as flowers also grew between 2013 and 2015 from an average of USD 454 to USD 770 per year (representing 11% of household income in 2015).

While the project was being designed, the difficult conditions of poorer and dependent people living in selected communities were noted, and action dedicated to improving not just income but also the quality of life of the families involved and their communities was identified and included. The strategy employed was that of the "Country Contests" developed by MASAL (Peruvian-Swiss project for sustainable management of soil and water 2001-2011), which had shown its impact on rural communities in the High Andes of Peru. This strategy involves a broad partnership of all members of participating families using talking maps. 53% of the families of 6 communities (146 families) from the River Quesermayo micro-basin participated in these country contests during 2014.

The contests introduced many improvements in the dwellings of participating families. More than 66% of families paved their courtyards which significantly improved the environment of the houses. Between 33% and 66% of families introduced other improvements such as fenced bio-orchards with good management practices, improved stoves and storage areas to reduce smoke and improve the air in the kitchen. Walls were decorated, and ecological refrigerators to optimize food preservation were installed. 33% of participating families built new bathrooms or silos, improving basic sanitation in communities that did not have these services.

The study has demonstrated the positive effect of intensive market-oriented production systems on household incomes and job creation in rural areas. The perceived gains at the family level in the short term have permitted small farmers to focus on the most profitable areas, align their production to meet market demand and limit their risks by more diversification.

The **Qorichacra** strategy has also maximized the economic impact and ensured sustainability through effective actions to improve the quality of life in the communities. It is hoped that families who have improved their living conditions are more receptive to production changes, and thus the impact will increase.'

The intervention model of the project has been in constant evolution, incorporating new designs of greenhouses with drip irrigation, diversifying crops and developing new markets. The average area of greenhouses has increased from 464 m<sup>2</sup> to 586 m<sup>2</sup>, helping farmers to be more professional in their work. These results confirmed the improved suitability of the Cuzco model in the high Andean regions. The CBC has been strategic in this expansion because of its proximity to country organizations, local governments and farmers.



*Group of farmers and Qorichacra project technicians trained in good agricultural practices by specialists of GLOBAL G.A.P. November 2014, Cuzco, Peru*



*Improvement in marketing practices in the market of Huancaro, Cuzco: indirect effect of the Qorichacra project*

The survey offers an approximate analysis of results and outcome on the basis of revenues, costs and benefits for the full period of 5 years and concludes that the investment in a greenhouse for growing vegetables, including strawberries, is clearly profitable overall. The survey also developed a list of key success factors and of major constraints from the experience of the project's participants, and identified particular aspects to bear in mind when improving the linkage between small farmers and demanding markets:

- The elements that influence production, such as market demand, technical / agronomic factors, and commitments between producers and buyers.'
- The cost and benefit of the technical support which includes the adoption of a particular technology package and compliance with the standards of good agricultural practices, so that producers and buyers can optimize their operations.
- Proper planning and commitment to implement improvements, investing in infrastructure and participation in training.
- Leveraging resources from public and private institutions to achieve scale, cost-efficiency and sustainability of the model.

Since 2014, the shared vision of the Syngenta Foundation and the Arcos Dorados company has been to develop a concept that can be scaled to the needs of several Latin American countries to meet growing demand for quality vegetables. The concept is based on the use of a market opportunity – such as the high quality Iceberg lettuce needed by McDonald's - to affect the families of small farmers. A new business dynamic within the vegetable value chain has been created by the project and the greenhouses have significantly helped to develop and improve the agricultural services market in Cuzco.

**Qorichacra** has created a timely, significant and instructive example that will help to promote and justify other local initiatives of this kin, since local governments and the private sector are becoming increasingly involved with similar initiatives in their policies of fostering local production and supporting small farmers in their regions.



*The small organized producer can make important progress as has been demonstrated in the experience of Qorichacra, and the women plays a key role in the whole process. Qorichacra and women play a key role throughout the process.*

## NOTE

Although every care has been taken to ensure that this study is current and contains truthful and factual information, some omissions or errors may occur. The study presents the synthesis of various internal documents and the authors cannot guarantee the veracity of all the information contained in this report. For economic calculations, it has used data from the technical guide created by the CBC for the project. SFSA, the CBC and Arcos Dorados do not accept any responsibility for any action or information that could be the result of any interpretation of the content, including the data used in this document.

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