Title:
Quinoa heritage as an important resource to be maintained through tourism experiences.

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Abstract:

The regions of Chile where Quinoa, an ancient Andean crop, is still cultivated, share certain common characteristics such as the marginality of its peasants, an isolated location, and a long distance to markets. However there has been an increasing awareness of the importance of its high nutritional quality and the potential of genetic resources they represent for the global biodiversity heritage. The concept of "agrobiodiversity" includes specific geographic circumstances that explain the development and specialisation of the agricultural practices of the region, and the concept of "agrotourism" could play an increasingly important role in maintaining this crop diversity and also the various local practices (agronomic and cultural associated traditions) that contribute to a very particular biodiversity of the Chilean quinoa.
In the case of the production of quinoa in Chile (held by Aymaras communities in the North part, Small-scale farmers in the Centre, and Mapuche communities in the South), our research team has been studying how the development of tourism in rural areas could stimulate to the revival of agriculture when it is encouraged by the tourism stakeholders of the area. The goal of this work is to develop a sustainable alternative to traditional agriculture, with consideration of the promotion of the landraces diversity and cultural associated practices. So first, we will demonstrate that a strategic analysis of agrotourism is necessary, studying both supply and demand. Second, we will demonstrate the need of improving the competitiveness of small-scale farms to achieve the sustainability of these farming systems.

Key words: Biodiversity, Community-based tourism, Quinoa, Chile, Agrotourism

Introduction

Quinoa has been recognized by the United Nations Food and Agricultural Organization (FAO) as one of the most outstanding world's crops due to its high nutritional quality (Vega-Galvez et al., 2010). Recently FAO has declared that quinoa will celebrate its own international year in 2013 (www.fao.org). The same institution has been proposing to the world's nations to sign and to ratify an international treaty to protect genetic resources which are essential for the world due to its use in basic food chains. In the Andean region, Quinoa has been cultivated as a staple food since the last seven thousand years (Mujica *et al*., 2004), and in Chile since the last three thousand years (Tagle & Planella 2002), well before the Incas' influence on the ancestral people inhabiting what is Chile today (from north to south ethnics: Aymaras, Quechuas, Licanantay, Collas, Diaguitas, Picunches, Pehuenches, Mapuche, Huilliches to mention the better known people groups of the country).
This heritage has been transferred through the time to small-scale farmers along the whole country and the crop survived from extinction in three main areas: in the Aymaras communities in the northern highlands region called *Altiplano*, in the center of the country in isolated coastal and marginal farmers' communities and, in the south of the country, mainly in horticultural small home gardens from the *Mapuche* communities, mostly maintained by women (Bazile & Negrete 2009). The main reason to understand why quinoa did not disappear at all is the conservation of ancient traditions and consumption of a staple-food in isolated localities not reached by the today's global market influence.

Plant genetic resources for food and agriculture (PGRFA) are the biological basis of world food security and, directly or indirectly, support the livelihoods of every person on earth. PGRFA consist of the diversity of genetic material contained in traditional varieties and modern cultivars grown by farmers as well as crop wild relatives and other wild plant species that can be used as food, and as feed for domestic animals, fiber, clothing, shelter, wood, timber, energy, etc. Whether used directly by farmers as a raw material or by plant breeders, PGRFA are a reservoir of genetic adaptability which acts as a buffer against potentially harmful environmental and economic global changes. The erosion of these resources poses a severe threat to the world's food security in the long term. Although often undervalued, the urgent need to conserve and utilize PGRFA as a safeguard against an unpredictable future is clear. The conservation and sustainable utilization of plant genetic resources are the keys for improving agricultural productivity and sustainability, thereby contributing to national development, food security and the alleviation of poverty (FAO 2011).

Farmers who can afford to invest in appropriate improved crop varieties and external inputs are usually rewarded with increased yield and higher incomes. Many farmers in developing countries cannot afford expensive external inputs such as fertilizers, pesticides or seeds adapted and improved for the particular ecological and economic situation. Plant genetic diversity, both at intra- and inter specific levels, is therefore a crucially important part of their farming systems to be maintained for coping with risks. Resource-poor farmers constitute over half of the world's farmers and produce 15-20% of the world's food. These farmers have not had access as much as others to modern high-yielding varieties because often these are not appropriate to their traditional cropping systems. It is estimated that some 1,400 million people, approximately 100 million in Latin America, 300 million in Africa and 1,000 million in Asia-Indian

regions, are now dependent on resource-poor farming systems in marginal environments.

Then, the intensification of agricultural systems often results in habitat destruction. Changes in agricultural systems are reported as causes of genetic erosion by many countries. Genetic erosion is also the result of economic pressures. In spite of the value and importance of maintaining genetic resources, including a large number of traditional crops, the individual farmer rarely realizes this value in the form of direct financial benefit. In economic terms, this is called "a failure of appropriation". Such failure of appropriation is common in the case of public and/or commons goods. The farmer has little financial incentive to continue growing these crops. There is, in fact, a disincentive when higher income can be obtained by converting from traditional varieties to modern varieties which contribute to habitat destruction. Without taking steps to make it worthwhile for an adequate number of farmers to continue to grow and develop such crops, economic forces will lead to continued genetic erosion. So, the following needs can be identified to promote food security and biodiversity conservation in these particular conditions:

- The need to reduce genetic erosion in the fields and, the importance to promote *in situ* conservation that includes farming systems and practices conservation too;
- The need to use this genetic diversity effectively through improvement or promotion programs.

To safeguard and to support world's agri-cultural heritage systems, FAO started in 2002 an initiative for the conservation and adaptive management of 10 GIAHS pilot sites. In this way the *Globally Important Ingenious Agricultural Heritage Systems* (GIAHS), a FAO project, try to maintain not only the genetic diversity *in situ* with financial incentives but also the whole farming system that explain the diversity with all the traditional farmers' practices. This important example of protection shows the needs for the preservation of the potential of genetic resources with maintaining all the cultural aspects of local communities which participates to the creation of this diversity. Worldwide, specific agricultural systems and landscapes have been created, shaped and maintained by generations of farmers and herders based on diverse natural resources, using locally adapted management practices. Building on local knowledge and experience, these agri-cultural systems reflect the evolution of humankind, the diversity of its knowledge, and its profound relationship with nature. These systems have resulted not only in outstanding landscapes, maintenance and adaptation of globally significant agricultural biodiversity, indigenous knowledge systems and resilient ecosystems, but, above all, in the sustained provision of multiple goods and services, food and livelihood security and quality of life.

Finally, we state that Chilean quinoa has survived extinction in isolated localities also because the modern agricultural practices in Chile have been faced towards exportation markets where quinoa is consumed only if it is certified as produced under ecological or organic farming (Brenes et al. 2001, Carimetrand 2002). Thus quinoa has never been in any governmental focus, as favoring formal organic farming (through official certification). The crop has been largely absent of main political orientations. Conversely, farming for exportations has been supported as many other neo-liberal policies for almost 40 years in Chile until present days (Valdes & Foster 2005). This economic model has caused higher inequality in Chile even to almost complete

monopolization of land property, particularly in the Araucania Region of Chile (Garin and Ortega 2009) where quinoa is one of the most ancient cultivated crops.

People and plants are linked since a very long time. So in our research, we will not only study agricultural biodiversity to remember this past but also to understand the resilience and capacity of adaptation for the agricultural systems. Our work has a focus on centers of origin for plants, as quinoa, which are the base of our alimentation because they represent dynamic systems which interact with wild relative's plants species and with human practices and societies. Without these interactions, they couldn't be maintained. During various meetings with stakeholders who have different point of view about the future of quinoa in Chile, we developed different prospective scenarios to dialogue about the future of the quinoa in Chile and about the impact of their activity on agricultural biodiversity conservation. In this paper, we will only present one of them, a scenario which is called VTT (for the Spanish or French acronym) for Territory Promotion through Tourism. For us, integration and recognition from tourism of all the aspects of agri-cultural practices on biodiversity dynamics is need for giving more weight to a national or an international consideration of generations of the farmers' practices for tangible assets (RRGG) and intangible (knowledge).

The goal of this work is to develop bases for a sustainable alternative to traditional agriculture, with consideration of the promotion of the landraces diversity and cultural associated practices. As a first step we will demonstrate that a strategic analysis of agrotourism is necessary, studying both supply and demand. Secondly, we will demonstrate the need of improving the competitiveness of small-scale farms to achieve the sustainability of these farming systems.

In the results, we present three tourism experiences as distinct ways for maintaining the Chilean quinoa's culture.

1. Context and Material : Quinoa in Chile (*Chenopodium quinoa* Willd.), a 5000-year old crop

Due to the existence of particular adaptations of this species in certain geographic zones throughout the Andes, five ecotypes are known associated to sub-centers of diversity.

From the five main sub-specific classification of Quinoas (Quinoas from Inter Andean valleys, from the Highland of Peru and Bolivia, from the Yungas in Bolivian subtropical forest, from the "Salares" or Salt flats of Bolivia, Chile and Argentina and the coast types at sea level in Chile and Argentina) only two principal groups of quinoas can be found in Chile: one corresponds to the cultivated quinoas with bigger pale seeds in the High Andean Salares of the Chilean Altiplano and a second group of quinoa, with darker and smaller seeds, the coastal ones in central-southern Chile and Argentina. The ancestral classification made by Andean cultures, which also includes a wild quinoa type called "*ajara*" or "*asha quinoa"*, morphologically similar to traditional quinoa.

The three ancestral zones of quinoa cultivation in Chile were visited and characterized.

11- The northern quinoa as the most adapted crop to highlands

The "*Salar*" ecotype can be found distributed in the regions of Tarapacá and Antofagasta; the materials are traditionally cultivated by Chilean Highland Indigenous communities, in saline soil with rainfall fluctuating between 100 and 200 mm per year between December and February. The materials found are closely related to the varieties of the "*Salar*" ecotype of Bolivia. Nevertheless, there is existence of evidence of the introduction of some materials in the Andean zone of Peru and the region of Antofagasta. In spite of this, the morphology dominating in the major part of the materials studied corresponds to the "*Salar*" quinoa.

The main features of the northern zones (around 19°S) are the altitude between 3500 and 4000 meters, an important drought season (less than 150 mm per year), and many frosts (more than 200 days/year). This crop is part of the ancestral cropping system only based on the quinoa and the camel livestock for the Aymaras communities who maintain a diversity of landraces associated to specific dishes. Then, their agricultural calendar is linked to traditional events.

12- Quinoa of the central zone

A notable difference existing in its cultivation in respect to the extremely dry conditions of the *Salar* quinoa in the north of Chile is that the concentration of rain found in the central and southern zone of the country are concentrated during the winter period, with rainfall fluctuations of between 700 and 1.900 mm per year, in accordance with the geographic zone comprising the Region of the Libertator Bernardo O`Higgins (VI) and the region de Los Lagos or the Region de Los Ríos (XIV).

In the central zone and south of Chile (Regions VI to X), the quinoa cultivated corresponds to the altitudes range between 0 and 800 m above sea level, medium rainfall (400-500 mm/year).

The localization of the quinoa of the central zone (around 34°S) is characterized by being a product of isolated old farmers that cultivate the coastal ecotype. These old farmers have the highest poverty index in the country and the increasing of introduced conifers plantation for cellulose exportation constitutes a new high threat to quinoa preservation.

13- A Mapuche women tradition in the South

In the southern region (around 39°S) quinoa is maintained as tradition by women in small "home gardens" next to their houses, together with vegetables, as has it has been the tradition in small surfaces (normally near than 100-200 m2). These surfaces never appear in the Chilean National Agricultural Census, what may explain why its cultivation in the south is not yet officially recognized.

It is always grown with abundant manure. This characteristic is not common in other regions, where the quinoa is considered as a crop needing neither a fertilizer, nor agrochemicals or pesticides to grow up. In theses gardens, the quinoa is grown together with corn, beans and potatoes, protecting them from the strong sunshine in the summer. The most relevant difference between highland quinoa and the *kinwua* or *dawe* (in the

Mapuche language) is that the latter is produced in zones with more rainfalls (1000-2000 mm/year) and at lower altitude above sea level.

The diverse types of quinoa come from a familiar heritage over generations, escaping from the diverse agricultural modernization programs. The actual surfaces assigned for the sowing of his crop are small, usually situated in "home garden". The traditional Indigenous or farmer systems are characterized by their great diversity, making possible to count on high number of crop species and subspecies (as landraces) with different uses in a familiar and community level, for example:

For consumption diversity includes staple food, condiment, to cure poultry diseases, for the preparation of *mudaï* (drink prepared by the Machi for *Mapuche's* celebrations). It is also recommended to be consumed by pregnant women (for inducing milk production) and as medicine (leaf infusion as anti-intestinal parasites), also seed coat saponins are destined to local markets as insect deterrents.

Some reintroduction programs are held by NGO's like CET Sur, based on the survival of endemic landraces.

The three quinoa agricultural regions of Chile share certain common characteristics such as marginality of its peasants, isolated location and long distances to urban areas and to markets.

There has been an increasing awareness of the importance of the potential of genetic resources they represent for the global biodiversity heritage. So we need to understand how it will be possible to connect tourism geographies for heritage sites to agrobiodiversity conservation.

2. Conceptual background: Linking Agrobiodiversity to Tourism.

The visiting of farmers and their agro-ecosystems, allowed talking with them about their practices and uses of quinoa. This sharing of visions and of the ways their values and knowledge could be maintained was also part of the conversation. Discussions were held about how they could establish an exchange system of goods and culture with people that came to their landscapes as ephemeral visitors.

Concern for "heritage", in its French version of "*patrimoine*" or the Anglo-Saxon one of "heritage", is often associated with western cultural history's originality and the spreading of the values related to it with a globalizing vocation. But the objects (artifacts, monuments, sites, animals, plant species and social practices) and the uses (memory and identity processes, transmission dynamics, links with the past and with history) today covered by the sphere of the western "cultural heritage" are sometimes already part of the cultural practices and collective representations of non-western societies. This plurality of "heritage" conceptions makes it possible to go beyond the rhetorical motif of the "great division" and to better redefine what makes world cultures different and what connects them. Moreover, though all societies do not attribute the same meaning or the same values to their heritage terminology, they are nonetheless part of a recent semantic and conceptual translation process of the international norms propagated by "heritage" institutions.

The difficulty in analyzing the layers and the differentiations of “heritage” vocabularies stems from the fact that international bodies have gradually included in the “heritage” field very different objects (architecture, town planning, art, landscape, environment, languages or practices and social representations) and have thus encouraged the actors to interpret certain local terminologies in terms of “heritage”, even though “tradition”, “culture”, “custom”, “memory” or “transmission” could have been considered autonomously. Moreover, the division of the “heritage” field into “cultural heritage”, “natural heritage” and “intangible heritage” contains in itself a classification of the real which is not directly transferred to social situations and which also obliges local actors to redefine their own categories of thought.

Besides, western “heritage” terminology is perhaps only pertinent to the extent that the actors themselves assert their right to this vocabulary and use it: “heritage”, “safeguarding”, “preservation”, “restoration”, “valorization” etc.

11- Tourism y Agriculture links

The concept of rural tourism is not only linked to the concept of landscape but also includes social aspects. So, sustainable rural development needs to post the farmhouses in debate and their activities in a more integrated landscape.
We need to consider "Products" but also "feel“, "experience” and acquisition of “local knowledge”.

To keep the concept of rural tourism is synonymous with the concept of landscape, which is interested only to the recreational dimension, we aim to understand the rural tourism as an inclusive concept and therefore more inclusive of social stakeholders that are part of agricultural production and industry live and interact in rural areas. The first line of analysis as research does not consider the rural population; the result is to be on the periphery of tourism studies, as well as the concern of geographers, economists, sociologists.
So you need to first place in debate, ie debate and develop the theme of rural tourism and then position the farmhouse with key features that enable a more integrated and sustainable development. The specific tourism demand associated with “*rurality*” is characterized not only by the recreational dimension: the tourist simply will not need to buy products, is also the "feel" or "experience" products discovery, land and regional products are present exchanges with producers, and the acquisition of knowledge with respect to regional characteristics.

Keane (2005) help us in this way and gave many definitions for rural tourism that include agrotourism, farm tourism, soft tourism or ecotourism, alternative tourism. And the European Union's definition considers “all tourism activities in rural areas”.

12- Tourism and agricultural biodiversity recognition

Farmers’ varieties, otherwise known as landraces or traditional varieties on the other hand, are the product of breeding or selection carried out by farmers, either deliberately or not, continuously over many generations. Farmers’ varieties tend not to be genetically uniform and contain high levels of genetic diversity. These varieties, therefore, may be difficult to define or distinguish unequivocally as a particular variety. Landraces, however, may be recognized morphologically. Farmers have names for them

and different landraces are understood to differ in adaptation to soil type, time of seeding, date of maturity, height, nutritive value, uses and other properties. Landraces, because of their genetic diversity, need to be the focus of most conservation efforts.

Three values of genetic variability can be distinguished in relation to the three functions of genetic variability:
Genetic diversity helps to provide stability (portfolio value) for farming systems at the local, national and global levels by smoothening yield variability through the maintenance of a wide range, or portfolio, of crops and intra crop diversity. Losses due to the failure of a particular crop or variety are compensated for by the yield of other crops or varieties.
Genetic diversity provides insurance (option value) against future adverse conditions as needs are constantly changing and because genetic resources may later prove to provide useful characteristics, such as resistance to new diseases or adaptability to changed climatic conditions.
Genetic diversity represents a “treasure chest” of potentially valuable but as yet unknown resources (exploration value). This is the reason for maintaining both wild ecosystems and traditional farming systems, as plants in these habitats are likely to contain and develop new and valuable genetic characteristics.

By using locally adapted farmers’ varieties, or mixtures of varieties, farmers are able to spread the risk of crop failure resulting from pest and disease epidemics or adverse environmental effects such as drought. Often, farmers’ varieties are well adapted to poor conditions. In the southern countries, local varieties could grow in low-fertility soils in arid zones. Similarly, in the difficult and unpredictable growing conditions that characterize much of the region (poor or erratic rainfall, very long or short growing seasons, no external inputs); it is landraces which provide smallholder farmers with a more reliable crop yield. In Chile, local quinoa varieties are valued, especially in the remote mountain areas where they are adapted to diverse ecosystems, including cold climate, dry and flooded areas, and saline, alkaline and acid soils.

To conclude this part through geographic perspectives, our consideration of the concept of “agrobiodiversity” includes specific geographic circumstances that explain the development and specialisation of the agriculture; and the concept of “agrotourism” could play an increasingly important role in maintaining this diversity of local practices that contribute to a very particular biodiversity of the Chilean quinoa.

Lane (2005) considers that we can speak about an integrated agrotourism when it is characterized by its occupants as a social construction with various steps: "co-building, negotiation, experimentation”. We could ask too the difference between ethno tourism and indigenous tourism.

So, we consider that we need to advance together, with all the stakeholders of the territory, during a co-learning process, to be able to develop sustainable tourism alternatives.

3- Results and discussion

In this part, we present three particular tourism experiences for maintaining the Chilean quinoa's culture; each one is adapted to its specific context.

11- Farmer's' life experiences on the "*Camino del Inca*" as a long-distance footpath

The main objective of this tourism construct is to leave a limited view to the National Parks to know the realities of the communities. The Quinoa of Tarapacá (in the first region of Chile) integrates a natural and historical area, farmers' cultural aspects, and local products associated to specific dishes. So to develop a new tourism experience based on this reality, two possibilities exist.

The first one concern the way where local communities try to use derived touristic attraction to catch existent tourism flux. For example, the Cariquima's situation on the "*Camino del Inca*" and near the Isluga's Vulcan offers opportunities to develop tourism infrastructure.

But it isn't sufficient to develop Quinoa's tours, it's necessary to connect all this aspects to the production areas. And the second experience in the north part of Chile which is support by the Cancosa community develops a totally different vision of tourism more integrated to others activities. In this way, three components of a sustainable development must be considered:

- The livestock: Llamas Livestock is one of the key developments since ancient times. Such activity is carried out by each family had grass collective access and individual corrals in various sectors of the community territory. Livestock participates to the promotion of culture to the practices of their traditions.
- The quinoa cultivation: Agricultural component concerns quinoa planting and it is now done at the community level, working in a co-managed.
- Tourism Development: The tourism component is a new axis of the territorial development for the community, with first class infrastructure to stay in their local hostel and benefit to specific dishes with local products.

Today this stage to define the circuits and tourism products for distribution and marketing is under development and integration to other existent touristic tours but its history begun seven years ago. In 2004, the Aymara Indian community of Cancosa, together with the community of Bellavista de Bolivia, began to develop a tourist project "International Circuit Pica - Cancosa - Bellavista - Llica and Uyuni", which through its dissemination and a successful call, with the participation and support of regional authorities, public and private sector in both countries, based on working together in search of better conditions for the realization of this ambitious project.

To consolidate this initiative, they signed an original Framework Agreement on Cooperation between the University of the Sea (Universidad del Mar de Chile) and Cancosa Aymara Indian Community, which seeks to improve management and architectural intervention Cancosa town of responsible tourism development, establishes the need for adequate technical assistance and cooperation of the Universidad del Mar (Chile) through its School of Architecture.

In the second half of 2006, the project "*Strengthening of the tourist routes of the municipality of Pica*", funded by Origins Program at the CONADI Institution of Chile, was centered on developing themed tours, as well as the generation of products through training to micro companies linked to tourism and tourism promotion of the Commune, by designing brochures.

And now, currently it is running the project "*Technical Assistance for tourism projects Mamiña Communities, Cancosa with the incorporation of towns and Collacagua Lirima*" funded by Origins Program. This project is based on providing tools that lead to better cope with the development of tourism in the area, through focused training to the real needs present in different localities, encourage work between communities, development models sustainable tourism product design with the look of the enhancement of natural resources and strengthening of cultural identity.

The Aymara Indian Community of Cancosa invites all forms of the public and private institutions to participate to the tourism area, but the main point of their development is that they manage their own future with a particular articulation between theirs three components of sustainable development.

12- Quinoa tours in the *Secano costero*

Rural tourism is configured as a local strategic development opportunity in the sixth region of Chile, where it still occur territory quinoa. Although this dry coastal area remained historically isolated by geography, now has new road connectivity and communications, bringing new visitors. The potential for economic development in this area is determined by its relative isolation and environmental conditions. But its main appeal is its community, we postulate that an informed, motivated and organized, may enter into new alternatives for business and social inclusion, linking local and global, from a unique, endemic and relict thanks to its culture, can offer its visitors. It is thus necessary to investigate the perceptions and attitudes of these people, on the tourism potential of quinoa, that is, they give meaning to this crop and that opportunities are willing to build with it. The study reports on prospective scenarios from the speeches of local actors involved in the cultivation of quinoa, the base having tourism potential that can represent the culture of quinoa. The results indicate that there has indeed been an increase in tourism and quinoa can be part of the attractions for tourists with special interests, however, the local community is not prepared to integrate synergistically to enhance entrepreneurship, a possible route of quinoa the short term. Quinoa tours in the *Secano costero*, in the central area of Chile (region VI), could exploit many isolated places where farmers are living, to share their culture and their gastronomy.

But also a quinoa route could integrate other existent touristic sites which were successful. So it could be associated to surf spot or traditional salt production on the coast. For example, a quinoa tour could be easy developed from other routes as the “Colchagua” wine tours in this region.

The results of the interviews in the study area, there is tourist potential of an economic nature, the beauty of the landscape and the relative geographic isolation of the area, setting of a rural culture quinoa production, make this crop in a tourist attraction factor,

recognized by all respondents. However, there is no strategic management can articulate private interests and public services, nor are there no budget to devote to the promotion of tourism, therefore, everything that has been achieved has been through projects, that if it can move, in isolated actions, not part of strategic planning, participatory, and sustainable. While it is clear the need to improve access roads and public transport, because supply is scarce and of poor quality, there is no action. There are many pending tasks, the coordination of actors, locally and globally, is one of them, as well as the projection of scenarios with the participation of the local community.

In this context, is of special interest tourism potential of quinoa, the consumption is in rising interest from both foreign consumers, as Chileans aware about healthy lifestyles and awareness of self care and care of the environment.

13.- Mapuche and economic relations in territories with tourist vocation.

The quinoa crops cultivated by the Mapuche communities in the territory that includes the municipalities of Villarrica, Pucón and Curarrehue, appears as a new opportunity to rethink the territorial dynamics, where the quinoa not only plays an economic role but also culturally. This territory presents a high tourist vocation, which differs from the rest of the region that presents the highest levels of poverty.

The Mapuche communities of these territories are developing a productive alliance between his producers and chefs of restaurants / hotels for incorporate the quinoa and another indigenous product in the gastronomic offer. Rethinking the future to promote a new Cultural and Gastronomic touristic perspective offers an improvement of the Mapuche economy.

Actually, the quinoa demand from the restaurants in general is satisfied in 70 % by agriculture enterprises from Temuco or from Bolivia, but they are not local production. Simultaneously they recognize that if they can offer a local product, they can pay a major price, being able to pay this cost. The important thing for them is to take a product that they could publicize as comes from Mapuche people, its agroecological production, a good presentation, and the diversity of varieties can play a visual effect to presents attractive plates.

The first results show that if the demand of chefs increases, there are conditioned to a quality and regular production. These requirements need to develop not only technical competence but also management capacity. Another results show equally that an increase of the production man / woman can unbalance the relation to level of the families.

The quinoa crops are cultivated preferably by women in her home gardens, nowadays an increasing demand for quinoa crops from local restaurants given the high tourist abundance. This new demand can break a point of actually balance in the structure of production of Mapuche families. This changed is being necessary to include a major protagonist of the men because the crops demand a major cultivated surface. Supporting the role of the woman in the home garden where the aims centre of self-consumption and the conservation of the rural local varieties. This change of productive structure, with more men as a “gender system’s transformation” of quinoa crops, can impact in the genetic diversity of quinoa in the territory.

Conclusion

In the case of the production of quinoa in Chile (Aymaras communities in the North part, Small farmers in the Centre and Mapuche communities in the South), we have been studied how the development of tourism in rural areas could participate to the reappraisal of agriculture when it is really connected with the actors of the tourism of the place.

The paper demonstrated that a strategic analysis of agrotourism is necessary, studying both supply and demand, to develop a sustainable alternative to traditional agriculture, with consideration of the promotion of the landraces diversity, and to improve the competitiveness of farms. In conclusion, to implement an alternative to traditional agriculture for maintaining quinoa landraces is not easy. It's really complex because we need to consider:
- duality between food and nonfood goods;
- duality between private goods (products) and public goods (landscapes, etc.);
- duality between real commercial and non commercial;

.. and not only supply and demand for tourism aspects.
- duality between natural and cultural heritage and agribusiness

Finally, we show a duality between Tourism and Non Tourism activities, and ask the question: does exist really integration?

So the main question for the future is how does tourism could change and, in the same time, preserve the future of quinoa heritage? One interested perspective of this research is to develop in the future a new framework for asking more the steps of the process to elaborate the link between touristic and agricultural activities than to develop touristic products as a final package.

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