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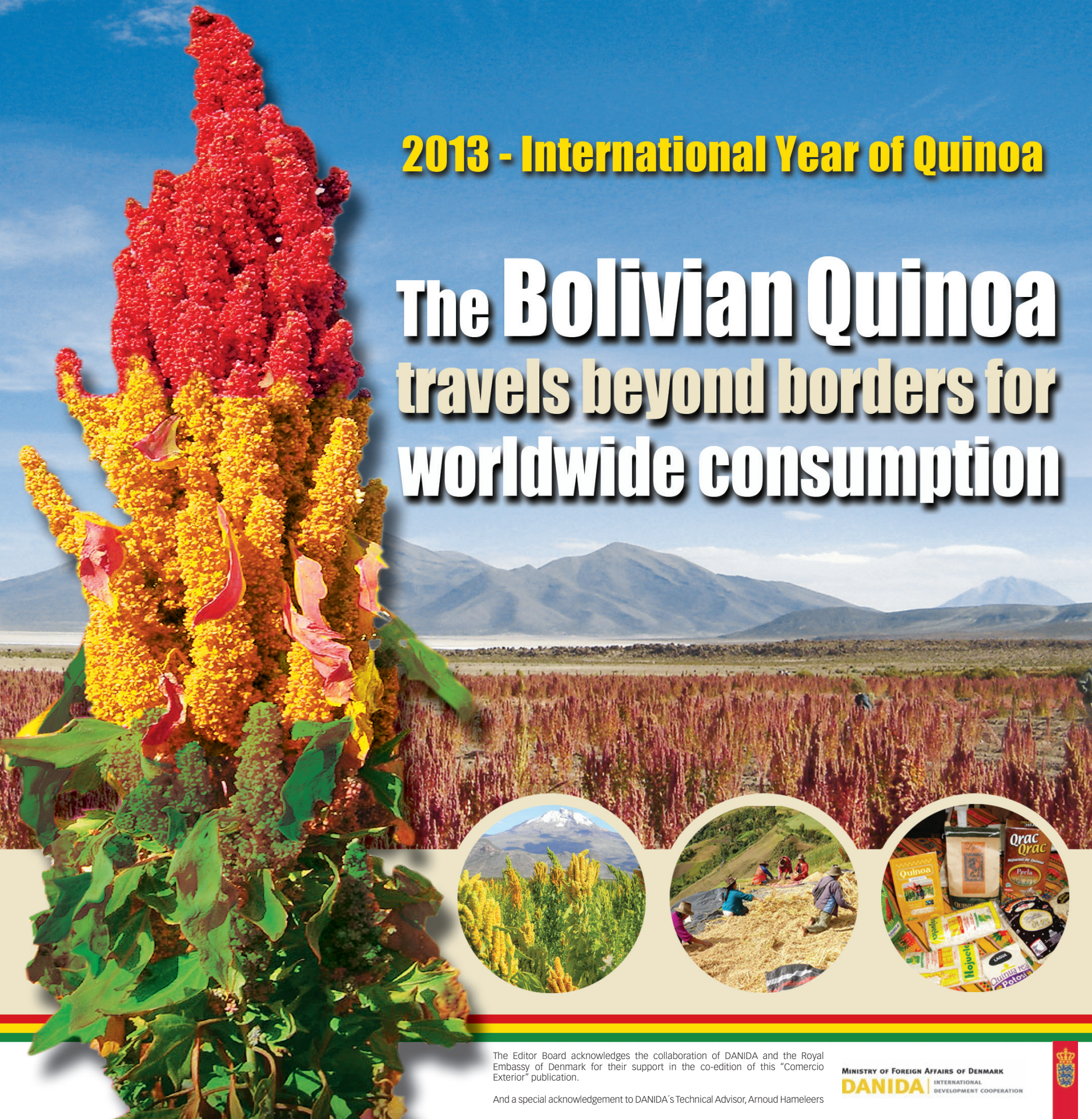


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2013 - International Year of Quinoa

The Bolivian Quinoa travels beyond borders for worldwide consumption



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MINISTRY OF FOREIGN AFFAIRS OF DENMARK
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Comercio Exterior *More than 22 years informing Bolivia and the World uninterruptedly*



Bolivian Quinoa: "The sky is the limit"



Lic. Gary Antonio Rodríguez Álvarez, MSc.
GENERAL MANAGER
BOLIVIAN INSTITUTE OF FOREIGN TRADE

We are pleased to present and commemorate in this special edition, the international promotion given to quinoa by the United Nations, in declaring 2013 as the "International Year of Quinoa", a successful initiative of the Bolivian government. We will also be providing important information regarding the production and processing of quinoa in the country.

Our aim is to offer our readers quantitative data such as production, export and price statistics, etc., as well as qualitative data regarding the quinoa market in relation to its tendencies and perceptions, which is expected to contribute towards greater geographical expansion of quinoa from Bolivia.

As different studies reveal, the origins of quinoa date back to the great Inca and Tiahuanaco cultures. Its commercial development in the country began about 10 years ago, and this has now allowed for a worldwide promotion of this remarkable Andean cereal. A cereal much desired primarily due to its nutritional characteristics and its potential for social and economic empowerment of its producers at the domestic level, but foremost because of its contribution towards generating a positive image of this country.

In Bolivia, quinoa production has increased by about 55% between 2006 and 2012, making the country the worldwide leader in terms of production, with almost 51,000 metric tons produced in 2012. During 2012, Bolivian quinoa exports have grown by almost 26% in regard to 2011, reaching approximately 80 million U\$ Dollars in value, representing 26,000 tons being placed in foreign markets. The United States is the main consumer, absorbing 64% of the total exports of Bolivian quinoa, followed by France, Canada, the Netherlands and Germany as the five main buyers of Bolivian quinoa.

Certain important variables are worth mentioning regarding quinoa exports, such as the fact that 87% of the total quantity exported is commercialized in Oruro, 98.8% is exported via the route Tambo Quemado-Charaña-Arica and then shipped from the port of Arica. It is also worth highlighting that the referential export price for Bolivian quinoa is 3,044 U\$ Dollars per ton; however, the price within the Bolivian market ranges from 1,264 USD/ton to 2,600 USD/ton, a price that varies depending on the region where it is produced, the quinoa variety and whether it is produced conventionally or organically.

Recently there have been many initiatives to support the development and promotion of quinoa in Bolivia. Domestic

as well as international institutions have linked their actions to the development of this Andean cereal. Many of these initiatives focus on promoting cooperation and alliances among the different actors in the productive chain, increasing awareness for higher levels of national consumption, as well as improving social and environmental agricultural practices, updating knowledge and promoting innovative ways to use and consume quinoa.

The idea is to obtain a commitment from the main participants in the production chain to generate food security, increase production and exports, as well as increase internal consumption. As an important part of this special topic of "Foreign Trade", we should highlight the Danish cooperation in this regard. We would like to thank them for supporting this publication.

The promotion of the sector has encouraged new tendencies at many different levels of the production chain, ranging from production techniques to amplifying diversity of quinoa products through innovation in processing. Innovation in terms of new ways of consuming quinoa was also stimulated through the creation of new gourmet style dishes by the famous international chef, Claus Meyer, who just inaugurated the GUSTU restaurant in La Paz, Bolivia.

Another important stimulus for the promotion of quinoa is the creation of the Quinoa Tourist route in Bolivia, offering tourists the opportunity to participate and learn more about this cereal and the communities that produce it, generating an opportunity to develop tourism.

With this publication, IBCE joins in the synergy of endeavors by the diverse domestic and international participants that support the development of this sector. We are certain this publication will be a landmark in distribution through the digital media, thus breaking a previous record obtained by a previous publication of IBCE about quinoa which reached more than 150,000 downloads. This publication is expected to generate the possibility of constructing a positive country image for Bolivia and most importantly given the recent increase in demand in the world markets, an opportunity to improve the quality of life of those people who are immersed in the production of the "Golden Andean Grain". This crop still has enormous probabilities of expansion if this is accompanied by access to modern technology as well as sustainability measures.



FAO Bolivia supports the families dedicated to the age old quinoa crop, contributing to food security

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The most important quinoa producing countries are Bolivia, Peru and Ecuador, and more recently quinoa is also produced in Chile, Argentina and Brazil

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The enormous international demand, its exceptional qualities and its international price have resulted in a large increase in the area cultivated

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QUINOA IN THE WORLD

Victor Hugo Vásquez
Vice Minister of Rural Development and Agriculture
MINISTRY OF RURAL AND TERRITORIAL DEVELOPMENT
PLURINATIONAL STATE OF BOLIVIA

Background – Vice Ministerial Task on Quinoa

The Bolivian Government, through the Ministry of Rural and Territorial Development (MDRyT) has been working on developing the South-Central Highlands (Altiplano) Quinoa production complex, within the framework of ensuring food security and sovereignty, which in 2010 was consolidated with the "National Policy and Strategy for Quinoa", developed in coordination with the production sector. This was further enforced in July 2011, by Law No. 144, "Productive Communities and Agricultural Revolution", which defines quinoa cultivation as a key strategic priority.

Another initiative, considered as one of the most important, was the Declaration of the International Year of Quinoa, a Bolivian Government initiative backed by the Food and Agriculture Organization (FAO) at the UN Assembly. This Declaration was approved in December 2011, and quinoa's exceptional nutritional qualities were highlighted, as well as its adaptability to different climatic conditions and its significant contribution to the fight against Hunger and Malnutrition.

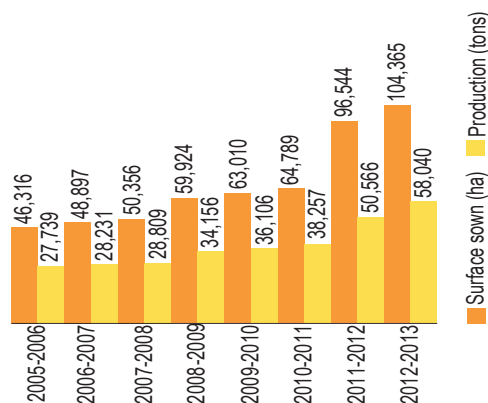
On the other hand, MDRyT promoted another project that may have an important impact in this sector in the future, "Support for the Quinoa and Camelid Production Complex", a program that will support strategies complementing the sustainable development of both quinoa and camelids. The program is being prepared for implementation through the International Quinoa Center in Bolivia.

Quinoa production and its producers in Bolivia

Quinoa production in Bolivia has increased considerably after the implementation of supporting policies in the sector and by the increase in the international market price. During the 2012/2013 agricultural campaign, production reached 50,566 tons, indicating a 32.17% increase in regard to the previous campaign. During that same campaign, the cultivated area reached 96,544 hectares, an increase of 49.01%.

Projected estimates for the agricultural campaign of 2012/2013 suggest that production will increase by more than 8%.

PRODUCTION OF QUINOA AND SURFACE SOWN Expressed in metric tons (t) and hectares (ha) respectively



Source: Data provided by SISPAM (2013)

The majority of actors involved in quinoa production are organized in farmer organizations, production associations and other entities such as:

- National Association of Quinoa Producers – ANAPQUI
- Central Farming Cooperatives "Operation Land" – CECAOT
- National Chamber of Quinoa – CNQ
- Departmental Chamber of Royal Quinoa Producers of Potosí – CADEQUIR
- Departmental Chamber of Quinoa Producers of Oruro – CADEPQUI-OR
- Departmental Association of Quinoa Producers of La Paz – ADEPQUIPAZ
- Bolivian Chamber of Quinoa Exporters – CABOLQUI

Internal consumption and future projections

In 2008, internal consumption per capita was 0.35 kg per year; in 2012 consumption increased to 1.11 kg per year, according to data from the National Statistics Institute of Bolivia, 2012.

In 2012, from the total production of quinoa (50,566 tons), 24% (12,013 tons) was destined to internal consumption and 52% (26,252 tons) was destined to export. The remaining 24% (12,301 tons) was surplus production.

For 2013, the forecast indicates that internal demand will reach 20,000 tons, and consumption per capita will reach 2 kilograms per year. Thus, quinoa consumption is gradually increasing.

The Bolivian Government is promoting the diversification of food consumption, since it is important that the population consumes products that have high nutritional value.

International Year of Quinoa - IQQ

Andean countries such as Bolivia have maintained control in the protection and preservation of quinoa in its natural state, an essential food for current and future generations, since it is a food that has high protein content with specific amino acids and therefore has a high nutritional value for human consumption. It could be called "a Gift from the Andes to the World", based on "a future planted thousands of years ago".

In this context the Plurinational State of Bolivia, headed by President Evo Morales, the Ministry of Foreign Affairs and the Ministry of Rural and Territorial Development, with the support of FAO, took up the task of promoting the "International Year of Quinoa", backed by different multilateral platforms and other venues such as UNASUR, MERCOSUR, CUMBRE ASPA, CUMBRE IBEROAMERICANA, ALBA-TCP and CELAC.

We should remember that on December 25, 2011, the General Assembly of the United Nations in its 66th anniversary and in reference to Agricultural Development and Food Security, declared 2013 as the "International Year of Quinoa" through Resolution No. 15/201 and based on the need to increase public awareness with regards to the nutritional, economic, environmental and cultural properties of quinoa. In 2012, President Evo Morales Ayma was named Special Ambassador for Quinoa.

On the February 20, 2013, the "International Year of Quinoa" was officially launched in the United Nations New York headquarters. Additionally, the International Coordination Committee and National Coordination Committees were formed.

Governmental Policies for the Sector

The Ministry of Rural and Territorial Development, through the Vice Ministry of Rural Development and Agriculture, approved and promoted a "National Policy and Strategy for Quinoa" through Ministerial Resolution No. 316, whose general objective is to promote and implement the technological development of the quinoa sector in Bolivia, and aims towards food security and sovereignty in order to promote "Better Living".



This policy presents the following strategic axes: I) innovation, technical development, and technology transfer, II) preservation and sustainable use of natural resources and the environment, III) internal and external trade and commerce, IV) credit and financing, V) institutional strengthening of public, private and communitarian sectors, and VI) production and services infrastructure.

Opportunities and Challenges

The Vice Ministry considers that quinoa producers have multiple opportunities, given that there is the political will to support the sector and increase ecological quinoa production and food safety, which will in turn generate more income and jobs by mitigating the migration from the rural population to urban areas.

From the economic standpoint, we can point out that financing mechanisms exist for quinoa production initiatives, to respond to the demands in the domestic and international fronts.

On the other hand, research institutions such as the National Agricultural and Forestry Innovation Institute (INIAF) and State Universities, among others, are exploring the genetic potential of quinoa to respond to different agro-ecological conditions and adaptation to the development of sustainable production systems incorporating camelid, llama, alpaca and sheep production.

Among the challenges the sector encounters are illegal exports and the adverse effects of climatic change.



Palmioli

GOURMET

We have been in the market for over 12 years, providing catering for all types of events, institutional and company cocktails, birthday parties, weddings, bar mitzvahs, gathering of friends baptisms etc.

We also serve events in other parts of the country.

This year, in adherence to the celebrations of the "International Year of Quinoa", PALMIOLI GOURMET has incorporated this noble product into almost all of its types of service, starting with a Seafood and Quinoa Paella, Bolivian Fish and Quinoa Paella, pasta buffet with quinoa linguini along with shrimp and mussel sauce, trout sauce, almonds and leek Parisian style (cream, chicken, mushrooms and bacon) and in the cocktails served there are the small meat and quinoa meatballs with linguini, along with the quinoa penne in a martini glass with some of the mentioned sauces. In addition, for their buffets there is the tabouli style sauce replacing wheat for quinoa. We include here a recipe for seafood and quinoa Paella.

SEAFOOD AND QUINOA PAELLA

Ingredients:

7 tablespoons of extra virgin olive oil
2 large brunoise onions, chopped in squares
1 teaspoon of garlic, chopped or mashed
2 red and green bell peppers chopped into squares (no seeds)
2 small packages of saffron seasoning for paella
½ cup of fresh peas
½ cup of green lima beans
200 gm of pork loin
200 gm of chicken fillet
2 spanish sausages
500 gm of smoked pork ribs
200 gm of calamari ringlets
200 gm of Octopus
100 gm of oysters
8 large shrimps, complete with head slightly scalded in shrimp broth
8 clams / or mussels in their shells cooked in the shrimp broth
1 roasted pepper, peeled, seeded, in strips for decoration
6 cups of broth prepared with the shells of the shrimp, white wine and vegetables
3 cups of quinoa, clean after washing
2 tablespoons of chopped parsley
2 tablespoon of chopped huacataya
Salt
White pepper

Preparation:


1. Warm up 7 tablespoons of olive oil in the paella pan or large frying pan
2. Add the chopped onion and cook until the onion and bell pepper are golden brown
3. Incorporate the chicken and pork in cubes, sauté and add the garlic and the smoked pork ribs; add 4 cups of broth and then the other 2 with the saffron seasoning; rectify the salt and pepper
4. Add the quinoa, the calamari ringlets, the green large beans and the peas; cover and cook until the quinoa is almost cooked (10 minutes approximately)
5. Incorporate the seafood and Spanish sausage
6. Mix until almost dry without burning. Put in the shrimp and shellfish
7. Sprinkle with parsley and huacataya, spray with olive oil and serve
8. Serve with lemons, garlic bread and oregano

If you wish for it to be slightly spicy, include llajúa made with tomato and locoto and add the desired amount when incorporating the quinoa or serve the llajúa hot sauce on the side.
Bon appétit! Buen provecho! Yuspagara jumanacatak!



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EMPODERAR DETI

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DANIDA | INTERNATIONAL DEVELOPMENT COOPERATION



Empowering Bolivians in Economic and Territorial Development with Social Inclusion

To contribute to food security and sovereignty, to improvements in rural productivity, recovering cultural visions and strengthening self-governance of rural, social and economic organizations of farmers in the contextual landscape of small agrarian communities and indigenous people. That is the objective of the EMPODERAR DETI program (Inclusive Economic and Territorial Development), promoted by the Ministry of Rural and Territorial Development together with the Danish Cooperation (DANIDA). The program benefits 64 municipalities in six Departments of Bolivia, positively affecting 14,823 Bolivian families of which 31% are headed by women.

The first step: Empowerment

"Empowerment" is a concept that is frequently utilized in reference to women, in gender-specific issues. For the program EMPODERAR DETI, "empowerment" means assisting in social and economic development, focusing on the needs of the people, who are building their own actions towards development, allowing them to strengthen their capacity to control their own lives, assuming responsibility for their own development.



The Territory and Economic Development

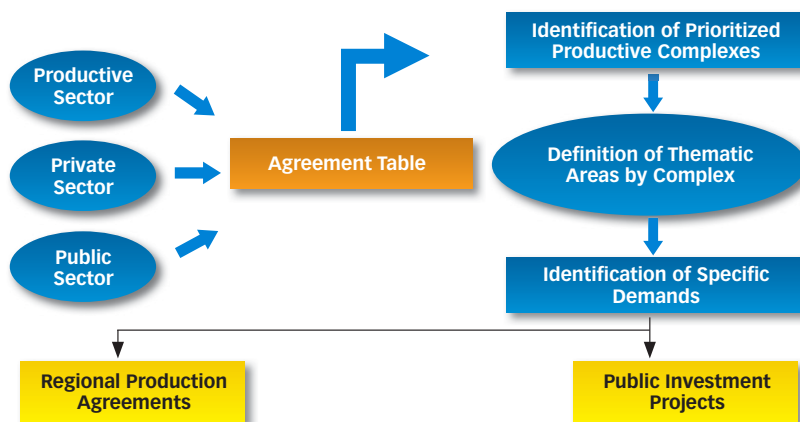
The focus on local economic development takes as the "action unit" the concept of "territory". This approximation is necessary in order to take into account three decisive issues regarding development: introduction of innovations in the local productive systems, designing programs to train human resources according to the necessities of each local context, and the specific reference to characteristics and opportunities that are linked to an appreciation of environment and cultural heritage as important assets for local development.

Next step: Agreement/consensus

For the EMPODERAR DETI program, agreement/consensus is the mechanism or source for planning that will allow articulating decisions from the different sectors in accordance to their priorities, and commits each responsible sector to the achievement of the defined goals, so as to prevent the dispersion of efforts.

For the EMPODERAR DETI program, agreement/consensus will be based on a negotiation with representatives of social groups, and the public and private actors, to achieve coordinated actions regarding a specific project or development plan.

Process of Agreement/Consensus



Covering 64 municipalities within six Departments of the Country

In its initial phase the EMPODERAR DETI program was able to reach 36 municipalities, through the work of Regional Operational Units: 18 municipalities in Potosí; 7 municipalities in the Cintis in Chuquisaca and 2 in Tarija; 5 municipalities in the Chaco region in Chuquisaca and 4 in Santa Cruz. In the current phase, the new areas of the project include 28 municipalities, of which 13 are in the Department of Oruro and 15 in the Department of La Paz. Thus, a total of 64 municipalities cover the scope of the EMPODERAR DETI program in six Departments.

14.823 Bolivian families are benefiting

This figure corresponds to the initial phase in the new areas that are within the scope of the EMPODERAR DETI program. The Chaco region has 6,790 families that are being supported, with 60% being represented by men and 40% by women, while in the Cintis region the number of supported families reaches 3,405, 81% of which are represented by men, 19% by women, and in Potosí 3,943 families are supported, 73% of which are represented by men and 27% by women.



Portfolio of EMPODERAR DETI projects

A total investment of Bs 85,000,000 (approximately 12,000,000 US Dollars), of which Bs 52,000,000 come from the DETI program itself, Bs 24,000,000 from the producers (counterpart) and Bs 9,000,000 from strategic partners in the different regions permitted the program to implement 255 specific interventions. Most of the investments focus upon the production system, but there is also investment in transformation and commercialization processes, connecting the producer more directly with the market.

EMPODERAR DETI and Quinoa

The program has a long history in the quinoa sector, primarily in productivity improvement, providing technology and mechanization for production, transformation and commercialization processes. In addition, the organizational base of the producers was improved, in order to provide an improved capacity for negotiation with exporting companies. Support is provided to producers to assist them in obtaining their international organic certification based on training processes and the development of registries, strengthening their organizations, accessing agricultural loans and insurance, as well as obtaining the registry of "certificate of origin" for the Royal Quinoa from Lípez. Currently 1,102 producers are being assisted in Potosí and Oruro, primarily with the mechanization of production, certification, storage, and the development of sustainable systems of production.





QUINOA: The golden grain of the andes

Origin

The Andes region, which is the cradle of the great Inca and Tiahuanaco civilizations, is considered the center of origin of numerous native species such as the quinoa (*Chenopodium quinoa* Willd). According to scientific investigations, the origin of quinoa is Lake Titicaca, and from here production expanded to the other Andean countries.

For 7,000 years the indigenous people have maintained, controlled, protected and preserved diverse varieties of quinoa in the different ecological regions and through natural germoplasm banks (seed banks) based on the principles of complementation, redistribution, and living in harmony with Mother Earth and Nature. Due to its high nutritional value as a food source, indigenous people and researchers call it "the Golden Grain of the Andes".

Quinoa was grown extensively in the Andean region by Pre-Columbian cultures, and its grains have been used in the diet of local populations in the inter-Andean valleys. Heisser and Nelson (1974) have shown archaeological findings in Peru and Argentina around the beginning of the Christian era, while Bollaerd and Latcham, quoted by Cárdenas (1944), also found quinoa seeds in indigenous tombs in Tarapacá, Calama, Tiltel, and Quillagua, a fact which demonstrates that its cultivation dates to very remote times. According to Jacobsen (2003), quinoa is one of the most ancient crops of the Andean region, harvested for approximately 7,000 years, and the great cultures of Tiahuanaco and the Incas participated in its domestication and conservation.

Widenow first described the botanical aspects of quinoa in 1778, as a South American native species, whose center of origin, according to Buskasov, was found to be in the Andes of Bolivia and Peru (Cárdenas, 1944). This was corroborated by Gandarillas (1979), who indicated that the area of its geographical dispersion was quite extensive, not only due to its social and economic importance, but also because of its great diversity of eco-types, which can be found both cultivated as well as in the wild.

According to Vavilov, the Andean region corresponds to one of the great centers of origin of cultivated species (Lescano, 1994) and within it, various sub-centers are found. According to Lescano, in the case of quinoa, four large groups can be identified according to the agro-ecological conditions where they developed: inter-Andean valleys, Altiplano (highlands), the salt flat region, as well as at sea level, which represent different botanical, agronomical and adaptation characteristics. In the particular case of Bolivia, in studies of the genetic variety in collections of seed banks (germoplasm) of quinoa, Rojas (2003) found six sub-centers of diversity, four located in the highlands of La Paz, Oruro, and Potosí which shelter the greatest genetic diversity, and two in the inter-Andean valleys of Cochabamba, Chuquisaca and Potosí.

Description of Quinoa in Bolivia

Quinoa (*Chenopodium Quinoa* Willd) is a grain that originated in the highlands of the Andean mountain range. Traditionally it grows in arid and semi-arid lands, with an extensive genetic variation of over 3,000 eco-types and with capabilities of adaptability to climate adversity and diverse ecological landscapes. Quinoa represents a strategic alternative food source which also has the potential of contributing to humanity's food and nutritional security.

The quinoa plant reaches various heights, from 30 to 300 cm, depending on the type of quinoa, the genotype, and the environmental conditions where it grows as well as the fertility of the soil. The ones that grow in valleys have the greatest height, those that grow at over 4,000 meters above sea level and in cold regions are shorter; in areas that are protected from wind and cold and are fertile, the plant reaches the greatest height, and the color varies with the genotype and phenological phases (FAO).

Quinoa is a small seed. Its size, shape and color make it appear to be a cross between a sesame seed and millet. It is shaped like a flat saucer with an equatorial band across its midsection. It has a yellow color without luster but in certain species, it varies from almost white to pink/orange or from red to purple and black. Although it forms grains, it is not properly a cereal. It is technically a plant from the *Chenopodium* family. It is an annual crop that produces and grows from 3 to 6 feet in height; and just like millet, its seeds are presented in clusters at the top of the stem. The seeds are covered by saponin (substances that contain resin) that are bitter, and that form a soapy solution in water. The seeds measure 1 mm in diameter approximately. This saponin is what saves them from being consumed by birds. Certain types of wheat grains could come close to the richness in proteins that quinoa has, but cereals such as barley, corn and rice generally have half of the protein that quinoa has. It also has an interesting balance of amino acids. Quinoa is exceptionally high in lysine which is an amino acid that is not very abundant in the plant kingdom. It has all of the essential amino acids; particularly arginine and histidine which humans need to

use proteins appropriately, especially in infants. In summary, quinoa has the greatest proportion and the best proteins in relation to the rest of the cereals, and it is rich in minerals and fatty acids (it is a source of vitamin E and various B group vitamins).

Quinoa is a grain that has intrinsic characteristics that are worth highlighting such as:

- Due to its wide genetic variability, its genetic pool is extraordinarily strategic to develop superior varieties (precocity, color and size of grain, resistance to biotics and abiotics, yield of the grain and sub-products);
- Its adaptation capacity to various adverse climate and soil conditions, since cultivation can be attained from sea level up to 4,000 m of altitude (highlands, salt flats, high-altitude grasslands, inter-Andean valleys), where other crops cannot be developed;
- Its nutritional qualities, represented by its composition of essential amino acids, both in quality as well as in quantity, constitute a functional and ideal food source for the human organism;
- The diversity of both traditional, non-traditional and innovative industrial uses; and
- Its low cost of production since the crop has very few demands in terms of resource and labor requirements.

In 1996, quinoa was catalogued by FAO as one of the promising crops for humanity, not only due to its great beneficial properties and for its multiple uses, but it was also considered as an alternative to solving the severe problems of human under-nutrition. NASA has also included it within their CELLS system (ecological control system for life-support) in order to equip its rockets for prolonged space missions, because it is a food source of outstanding nutritional composition as an alternative for solving problems of insufficient protein intake.

During investigations that were carried out between 1996 and 1997, the results obtained by NASA concluded that the Royal Quinoa possesses a noble nutritional composition with unsurpassable nutritional benefits, as compared with other crops for human consumption. Thus we can highlight that quinoa has the following nutritional values:

CHEMICAL COMPOSITION OF QUINOA

Comparison with other cereals

| Energy value | Quinoa | Wheat | Rice | Maize |
|----------------------|--------|--------|--------|--------|
| Kcal / 100g | 350.00 | 309.00 | 353.00 | 338.00 |
| Protein / 100g | 13.81 | 11.50 | 7.40 | 9.20 |
| Fat / 100g | 5.01 | 2.00 | 2.20 | 3.80 |
| Carbohydrates / 100g | 59.74 | 59.40 | 74.60 | 65.20 |
| Water / 100g | 12.65 | 13.20 | 13.00 | 12.50 |

This information shows that quinoa possesses higher concentration of proteins and a lesser quantity of fat in relation to wheat and corn, and also that as for minerals, Royal Quinoa contains calcium (which is necessary for bone formation and the nervous system), iron (which strengthens the immunological system), and zinc (which prevents cancer and strengthens the immunological system).

MINERAL CONTENT OF QUINOA

Comparison with other cereals

| Energy value (mg / 100g) | Quinoa | Wheat | Rice | Maize |
|--------------------------|---------|--------|--------|--------|
| Calcium | 66.60 | 43.70 | 23.00 | 15.00 |
| Phosphorus | 408.30 | 406.00 | 325.00 | 256.20 |
| Magnesium | 204.20 | 147.00 | 157.20 | 120.00 |
| Potassium | 1040.00 | 502.00 | 150.00 | 330.00 |
| Iron | 10.90 | 3.30 | 2.60 | - |
| Manganese | 2.47 | 3.40 | 1.10 | 0.48 |
| Zinc | 7.47 | 4.10 | - | 2.50 |

Quinoa is the only vegetable food source that possesses all essential amino acids, trace elements and vitamins, and does not contain gluten. The essential amino acids are located at the nucleus of the grain, which is different from other cereals that have them in the external shell or husk (such as in the case of rice or wheat). It also has over 3,000 varieties and ecotypes, both domesticated and wild.



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FAO

Strengthens the agro-ecological production of quinoa based on Community Agriculture of Farmer Families

In Bolivia the Food and Agriculture Organization of the United Nations (FAO) promotes the strengthening of family units who are dedicated to the cultivation of quinoa in an ancestral production style, thus contributing to food safety and security.

Historical and Cultural Importance

The Andes, which is the cradle of the great civilizations of the Incas and Tiahuanacotas, has been the center of origin of native species with high nutritional value such as the quinoa (*Chenopodium Quinoa Wild*), which for many years was the primary food source for these cultures. Currently, and since the declaration of the "International Year of Quinoa" (2013) – an initiative that was promoted by the Plurinational State of Bolivia – this crop is currently under expansion, representing a great potential to improve the conditions of life for the population of the Andes and the world, especially in reference to Food security and nutrition safety.



The Food and Agriculture Organization of the United Nations (FAO), facing the global need to identify crops that have the potential for producing a high quality food source, has presented quinoa to the world because of its high nutritional value as well as its agricultural versatility, with the purpose of putting forth an alternative to fighting hunger in diverse regions of the planet.

Quinoa's potential in contributing to Food Safety and Sovereignty

The benefits of quinoa production are provided by its high nutritional value. According to a study carried out by FAO in the year 2011, the protein content of quinoa varies between 13.81% and 21.9% depending on the variety. Due to its high content of essential amino acids, quinoa exceeds the contents of protein of wheat and barley, which allows it to be compared favorably with proteins found in milk.

Taking into consideration that FAO has as a strategic objective to eradicate hunger, malnutrition and food insecurity, its participation in the International Year of Quinoa is not minor. Through a series of strategies developed with the Plurinational State of Bolivia, it seeks to link an increase in sustainable agricultural production to the economic, social and environmental aspects and the improvements in means of livelihood of rural populations, particularly for women and young adults. For a reduction of hunger and poverty FAO recommends a "two-way approach" that would consist, on the one hand, a) to improve the sustainability of production systems, and b) to ensure access of food to those most in need. This should be within a favorable framework for food security, where governments can ensure economic growth and development with macroeconomic stability, governance and institutional capacity.

In a phased approach, Bolivia has been building a legal framework which is favorable for carrying out Human Rights to Adequate Food (HRAF) which has been incorporated into the Constitution. Likewise, it is worth highlighting the initiatives that are linked with agricultural and productive development (Law No. 144 Productive Revolution; Law No. 3525 Ecological Agroforestry Production; Law No. 300 Mother Earth) and the strengthening of farmer's economic and community organizations (OECAS Law and OECON Law). From the perspective of measures undertaken by the Bolivian government for the protection of HRAF there is nutrition supplementation in schools, zero malnutrition, motherhood nursing subsidies, in which quinoa was introduced as a food source that can provide good quality proteins to those families. Groups such as pregnant women, nursing women and children have priority.

Promoting efficient and integrated management of Quinoa production, contributing to the well-being of families that live in the rural areas of the country

In the highlands of the Andes region, quinoa is one of the most important crops. Small producers with limited access to natural resources usually carry out its production. For this reason, FAO collaborates with the Bolivian Government in the formulation and adoption of policies in favor of sustainable development of small farmer families and community agriculture, committing its families, communities and producer associations to sustainable production based on access to quality public services for production, commercialization and transformation.

In modern agriculture, the production of seeds constitutes a specialized activity, because it implies the conservation of the genetic quality, the purity of the variety and its physical qualities, its viability and health status. Although quinoa is grown extensively, advances in terms of yields have been limited; this is due to a variety of factors, one of them being the reduced use of quality seeds. Currently most producers use the same grains that are commercialized as seed. Sowing with this material causes problems afterwards, such as having plots with a mixture of plants of different ecotypes which in turn mature in an irregular way causing problems with cultivation, harvesting and postharvest activities.

Within this framework, since 2011 FAO has been providing technical assistance to the Plurinational State of Bolivia, with the project "support to farming families to improve availability, access and use of quality seeds in the high Andean regions", whose short name is "Semillas Andinas" (Andean Seeds). This is executed with financial support from the International Cooperation Agency for Development (AEICD) and with active participation of the Ministry of Rural and Territorial Development (MDRYT) and the National Institute for Agriculture and Forestry Innovation (INIAF). The objective of the "Semillas Andinas" project is to contribute to food security in the Andean regions of Bolivia, and the improvement of production systems, based on improved access to and use of better quality seeds, which in turn will allow the articulation and increase of quinoa, potato and broad bean production in a sustainable and efficient manner, while at the same time generating local storage capacity. To that effect it works on the development of a multi-task and multi-sectorial strategy that will allow the promotion of the use and access of certified seeds in the high Andes region of Bolivia.



Another component of the project is the strengthening of institutional capacities for formulating public policies and norms which are adapted to the production systems of the region. Likewise, stimulating the active participation of public and private entities and systems of community administration, will promote the supply of quality seeds in order to counteract the problem of natural disasters.

The project implements the methodology of Farmer Field Schools, whose strength lies in developing a participative group for training and learning, through which organizational processes are strengthened and developed in regard to knowledge and technical capacities in the various production processes. Additionally, administrative and business skills are developed, providing farmers with the necessary abilities to prepare and execute marketing and business plans. To date, with the support of this project seed producer groups have been able to sell a total of 36 metric tons of certified seeds, including potato, broad bean and quinoa, with an average price 71% higher than the price of conventional seeds.

This initiative intends to benefit about 1,500 users of seed that grow quinoa, potato, and broad bean, thus improving the yields and economic revenues by at least 25%. This project is intended to produce approximately 1,000 metric tons of certified seed. Currently, those who benefit belong to farming families in 30 communities of the high Andes region in the Departments of La Paz, Oruro and Potosí.

Commitment to research and cooperation among Quinoa-producing countries

The International Year of Quinoa has deepened the need to promote research in the Andean region in order to be able to extract all of the productive, dietary and economic potential of quinoa and other Andean grains. Within this framework, the FAO has subscribed an agreement with the Ministry of Rural and Territorial Development, in order to encourage a regional alliance that can promote collaborative research between quinoa-producing countries. The result of these studies and research could promote the implementation of the International Center for Quinoa and Andean Grains. The implementation of this center could result in regional seed banks of Andean grains, as well as proposals for the training of national and international technicians. This constitutes the ideal platform for the diffusion and administration of knowledge and training.

In synthesis, the recent diversification of international food markets in pursuit of food sources that are linked to ancestral crops has caused quinoa to pass from a subsistence crop to a product with potential for internal consumption and export. For FAO, quinoa is part of the strategic food sources that would allow the eradication of malnutrition, and therefore the promotion of internal consumption is an important action.

This publication was made possible thanks the support and financing of the FAO, through the Semillas Andinas project



Through integrity, respect and productivity

We maintain our national leadership and project Bolivia to the world.

FINO, a true friend.



FINO
Industrias de Aceite S.A.



2013: International Year of Quinoa

The year 2013 has been declared by the United Nations General Assembly as "The International Year of Quinoa" (IYQ) with the theme "...a future planted thousands of years ago", in recognition of the Andean people who preserved this exceptional crop as a food source and for future generations, thanks to the preservation of its traditional knowledge and practices and ways of life that are in harmony with nature.

Resolution No. 66/221, dated December 22, 2011 and adopted by the United Nations General Assembly, declared the year 2013 as the IYQ, as proposed by the Plurinational Government of Bolivia. This Resolution was co-sponsored by Argentina, Australia, Azerbaijan, Brazil, Cuba, Ecuador, El Salvador, Philippines, Georgia, Guyana, Honduras, Iran, Liberia, Mexico, Nicaragua, Paraguay, Peru, Seychelles, Venezuela and Uruguay.

The IYQ is a catalyst, allowing for the exchange of information and contributing to the generation of programs and medium- and long-term projects for the sustainable development of quinoa production in the world. It also allows this product to obtain worldwide attention regarding its broad genetic base, and its potential value for food security and the eradication of poverty, in support of the Millennium objectives.

The main beneficiaries are multiple and diverse, from governments to small farmers and indigenous populations; from the private sector to the agrobio sector, fair trade, "slow food" and organic agriculture, and cosmetic and pharmaceutical industries, among others. At least 130,000 small producers of quinoa in South America will benefit from improved sales, better prices for their crops, and the return to ancient practices in a sustainable manner.

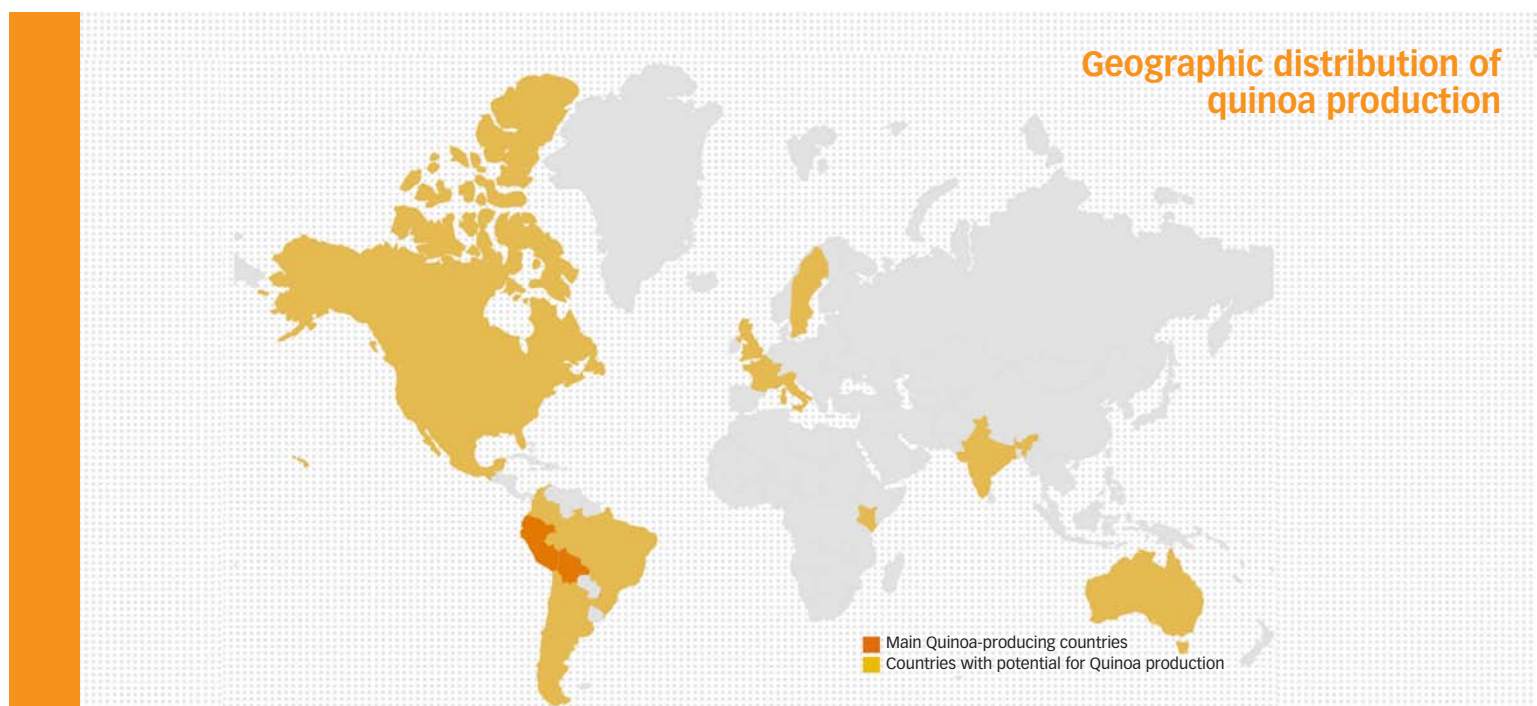
The objectives of the IYQ are:

- To promote greater international cooperation and alliances between public and private actors as well as non-governmental organizations involved in the production, promotion and sustainable use of quinoa worldwide.

- To increase awareness in relation to the need for improved agricultural practices in the production of quinoa that are more sustainable and to establish policies that promote its conservation and sustainable use throughout the world.
- To increase the awareness of people around the world regarding the properties and the added value that quinoa can provide in term of nutritional value and in their local economies, particularly at the community level.
- To recognize the valuable contribution of indigenous people as guardians of quinoa for present and future generations.
- To generate new knowledge resulting from exchange between different groups.
- To diversify the use of quinoa by means of new and varied forms of consumption.

The technical report, "Quinoa: An Ancient Crop Contributes to World Food Security", produced by PROINPA (Promotion and Research of Andean Products) and FAO, is an updated and detailed compilation of the nutritional benefits and agricultural versatility of quinoa; the expansion and exploration of production conditions of the crop to other continents, based on its high potential to contribute to food security, especially in those countries where the population does not have access to protein sources or where production conditions are limited by low humidity and reduced availability of inputs.

The main challenge for Bolivia, within the framework of the International Year of Quinoa, is the development of a denomination of origin for the Royal Quinoa which will legally protect its production.





Bolivian Figures on Quinoa

Bolivian production

The main Quinoa-producing countries are Bolivia, Peru, and Ecuador; more recently production has also expanded to Chile, Argentina, Brazil and other Latin-American countries. For many years there has been experimental expansion of this crop in countries such as the United States, Canada, France, The Netherlands, Denmark, Italy, India, Kenya, Morocco, Australia and China. Other countries at present are carrying out agricultural trials to prepare for commercial production.

12.8%
will grow the
production for the
2012- 2013
campaign

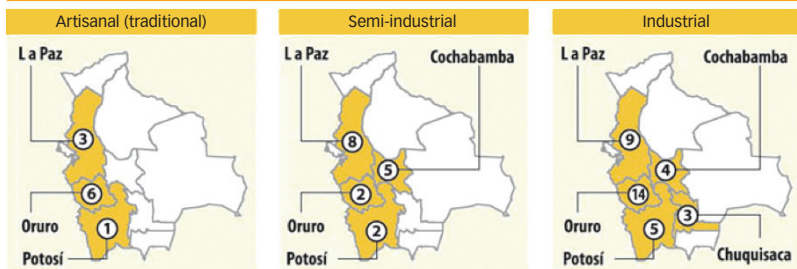
Quinoa production in Bolivia is expected to increase by 12.8% for the 2012- 2013 campaign. The production of quinoa is currently in expansion towards different geographical areas of the planet due to its extraordinary characteristics of adaptability to diverse soils and climate conditions. In the regions of origin, there is an incentive for the production of certified quinoa, following ancient procedures in accordance with current national and international norms for organic products and conventional products and other requirements needed by the Quinoa importing countries. Organic production has become an incentive for producers and consumers around the world, with a growing tendency for "responsible and green consumption". The use of fewer chemicals is valued, with the purpose of safeguarding the health of the consumers.

In 2001-2002, Bolivia registered over 37,000 ha of quinoa grown in approximately 70,000 productive units, of which 60% was commercialized and exported. During the same time Peru and Ecuador registered 60,000 ha and 2,500 production units, respectively.

During the 2011-2012 campaign, Bolivia increased the area of cultivation to 96,544 ha, achieving a production of 50,566 metric tons, an increase of 75.5% during the past five years. According to the data of the Ministry of Rural and Territorial Development, it is expected that production will increase by 12.8% during the 2012-2013 campaign.

The production of quinoa during the 2011-2012 campaign in Bolivia was concentrated in the Departments of Oruro (17,922 tons), Potosí (14,906 tons), La Paz (8,611 tons) Cochabamba (161 tons), Chuquisaca (40 tons) and Tarija (13 tons). In the country there are 62 processing plants of which 16% are artisanal, 27% are semi-industrial and 57% are industrial. 35% of all processing plants are located in Oruro.

Number of quinoa processing plants by Department



Source IBCE Data / Graphic Info (FMG/ "La Razon")

In Bolivia, quinoa crops are cultivated by about 6,000 permanent producers in 10 municipalities in the southern highlands of the country. Some producers have "organic production" and "fair trade" certifications, thus providing added value to their products in relation to conventional production.

Description of Quinoa Tariffs

Until 2011, the tariff code for quinoa was included in "other cereals" (1008.90), but as of 2012 all of the countries have incorporated into their tariff nomenclature the "Fifth Amendment of the Harmonized Commodity Description and Coding System", published by the World Customs Organization, which proposes various changes in the classification of the chapter regarding grains.

1008.50
Quinoa's hs-code

Quinoa was recognized with the assignment of its own 6-digit code 1008.50 Quinoa (Quinoa) (Chenopodium quinoa).

The corresponding NANDINA classification for Bolivian quinoa exports are:

1008.50.10.00 Quinoa (Chenopodium Quinoa) for sowing
1008.50.90.00 Other quinoas (Quinoa) (Chenopodium Quinoa)

Bolivian exports

During 2012 Bolivian quinoa exports were 26,201 tons, for a value of approximately 80,000,000 US Dollars, much higher than the 2,000 tons that were exported in the 2002 for a total amount of 2 million US Dollars, thus having grown almost 40 times in less than 10 years.



79.8
million US Dollars

26,201
tons

In 2012 exports were destined to 25 countries worldwide, the main ones being the United States (with 64% of the total exports), followed by France (10%), Canada (6%), the Netherlands (5.6%), Germany (3.4%), Australia (2.3%), Brazil (1.8%), Israel (1.7%) and the United Kingdom (1.2%). These nine destination countries represented 97.8% of total Bolivian quinoa exports.

Export demands in 2012 were greater in regard to 2011, and as a result prices increased by almost 25.7%. It is expected that this trend will continue during the coming years.

Bolivia: Quinoa exports to the world, 2011 - 2012

(Expressed in Kilos and US Dollars)

| Country | 2011 | | 2012 | |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|
| | Volume | Value | Volume | Value |
| United States of America | 10,654,781 | 34,252,863 | 16,516,180 | 51,054,393 |
| France | 2,552,487 | 7,958,266 | 2,644,737 | 8,070,875 |
| Canada | 1,338,514 | 4,189,948 | 1,755,015 | 5,138,713 |
| The Netherlands | 2,273,492 | 6,983,395 | 1,487,380 | 4,484,951 |
| Germany | 895,532 | 2,628,276 | 921,309 | 2,682,301 |
| Australia | 496,270 | 1,652,302 | 552,672 | 1,870,975 |
| Brazil | 389,148 | 1,158,232 | 493,043 | 1,496,393 |
| Israel | 282,505 | 804,331 | 493,600 | 1,374,354 |
| United Kingdom | 487,351 | 1,414,080 | 371,017 | 1,071,988 |
| Chile | 132,029 | 378,775 | 142,070 | 443,207 |
| Argentina | 299,256 | 184,813 | 261,376 | 329,716 |
| Japan | 80,425 | 240,518 | 105,600 | 315,584 |
| Spain | 33,378 | 109,165 | 101,913 | 287,973 |
| Sweden | 98,784 | 365,920 | 80,614 | 246,780 |
| Belgium-Luxemburg | 101,600 | 331,025 | 81,280 | 239,770 |
| Denmark | 62,235 | 195,800 | 64,516 | 219,870 |
| Italy | 58,018 | 184,768 | 36,747 | 123,562 |
| Malaysia | 59,380 | 190,545 | 29,765 | 121,381 |
| Switzerland | 52,320 | 173,503 | 31,194 | 89,020 |
| Colombia | 7,056 | 19,436 | 19,299 | 68,478 |
| South Africa | 10,140 | 28,580 | 8,041 | 23,335 |
| Costa Rica | 0 | 0 | 3,024 | 8,342 |
| Peru | 0 | 0 | 615 | 2,020 |
| Taiwan | 0 | 0 | 207 | 650 |
| Nicaragua | 0 | 0 | 11 | 50 |
| El Salvador | 552 | 2,340 | 0 | 0 |
| Total Quinoa Exports | 20,365,524 | 63,445,879 | 26,201,225 | 79,755,682 |
| Total destination countries | | 22 | | 25 |

Sowing a future for bolivians

INIAF AT THE CUTTING EDGE OF INNOVATION FOR FOOD SAFETY AND SOVEREIGNTY

The National Institute for Agricultural and Forestry Innovation (INIAF) is the official institution for research, technical assistance and seed certification for the agricultural and forestry sector of the Bolivian Government; aimed at food security and sovereignty, within the legislative framework of the legislation for the Productive Community Agrarian Revolution, legislation of the Mother Earth and the Integrated Development for Living Well. It is the articulating entity that generates, adapts and transfers technology towards achieving food security and sovereignty, contributing to the development of the sector, in harmony with the governmental agricultural and forestry policies. Thus, it promotes the development of nine strategic food programs which are developed in a planned manner along with strategic partners.

According to Supreme Decree No. 29611 issued on June 25, 2008, INIAF assumed the role of recovering the leading role of the Bolivian Government in research, technical assistance and safekeeping of genetic resources for agricultural and forestry sectors aimed at food security and sovereignty. Through a participative process INIAF has prepared and consolidated a five year plan for the 2012-2016 five year period, the Project for Innovation of Agricultural Services (PISA), which has the objective of generating innovation in agriculture and forestry in order to increase agricultural productivity in order to contribute to attaining food security and sovereignty. The INIAF has prioritized nine production chains for food security and sovereignty of the Bolivian people. These chains are corn, wheat, potato, quinoa, rice, sugarcane, vegetables, forestry, cattle raising and fodder, involving 7,736 producer families with an average investment of USD 187 per family. It also manages the safekeeping of over 15,000 accessions (varieties) of genetic resources.

PISA will strengthen the National System for Forestry and Agricultural Innovation (SNIAF), which will allow for the development of policies for the agricultural sector and invigorate immediate activity of the players through the investigation fund. Therefore SNIAF is a new administration model which has the participation of institutions, organizations and public and private players in the sector; thus articulating research and technical assistance for direct benefit of the agricultural and forestry producers throughout the whole country. All of this with the final purpose of strengthening local structures through "spaces for consensus" among producers, government entities and organizations that provide support on a national, departmental and local level.

INIAF consolidated the State Councils for Agricultural and Forestry Innovation (CDI) in the nine departments of Bolivia. These CDI are spaces that are led by the autonomous state governments and municipal governments in consensus with

organizations of producers and supporting entities, while attempting to facilitate the incidence in public policies that are in the interest of the departments and establishing technical assistance strategies that address the convergent demand for agricultural and forestry innovation in favor of agricultural and forestry producers for each department. At a local level they work with 43 local spaces of consensus (ELC) within each department. The spaces allow the convergence of the demand for technical assistance and the institutional offering of the public sector (state government, regional or municipal) and other organizations which generate knowledge, technical assistance and innovation or the provision of services. The aforementioned reasons give birth to the need for institutional articulation between the Plurinational Council of Innovation (CPI) and the Departmental Councils of Innovation (CDI) as well as the Regional Council of Innovation (CRI).

To this date, there are nine organized CDI's for the nine departments and 43 Locations for Consensus. Likewise 13 subprojects have been prepared in Cochabamba, Tarija, Beni, Potosí and Santa Cruz regarding specific themes and strategies that have reached a consensus at a state and local level.

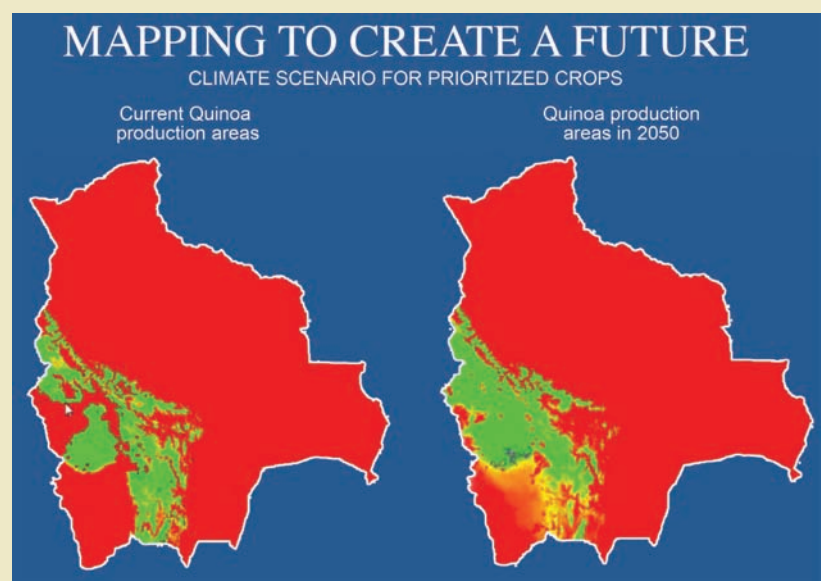


TABLE OF QUINUA VARIETIES

| Variety | Registry N° | GENERAL CHARACTERISTICS OF THE PLANT | | | | | |
|----------------------|--------------|--------------------------------------|----------------------------------|------------------------------------|---------------------------|------------------------------|----------------|
| | | Earliness | Predominand color when flowering | Predominand color when at maturity | Days on initial flowering | Days to initial ripe cluster | Total maturity |
| Real Blanca Puñete | RV-QU-010-08 | Delayed | Green | Pale yellow | 98 days | 158 days | 205 days |
| Real Blanca Dedo | RV-QU-011-08 | Delayed | Green | Intense yellow | 110 days | 165 days | 220 days |
| Real Pandela | RV-QU-008-08 | Delayed | Green | Dark pink | 98 days | 155 days | 210 days |
| Pandela Pisanck'alla | RV-QU-009-08 | Delayed | Green | Purple | 95 days | 155 days | 200 days |
| Real Blanca Chojllo | RV-QU-013-08 | Delayed | Green | Intense yellow | 115 days | 145 days | 190 days |
| Huallata | RV-QU-012-08 | Delayed | Mixed red - green | Red and white | 110 days | 160 days | 210 days |
| Toledo | RV-QU-014-08 | Delayed | Green | Orange | 125 days | 160 days | 195 days |

National Quinoa Program and its real importance as a food source

In 2013 -the International Year of Quinoa (IYQ), as declared by the United Nations (UN) in response to a Bolivian initiative- quinoa is considered the “Golden Grain of the Andes” and is one of the most nutritionally complete food sources. The Bolivian government through the Ministry of Rural and Territorial Development (MDRyT) has prioritized different activities which it is promoting at the regional, national and international levels, with the final purpose of marking a presence at a worldwide level regarding the roots and origin of quinoa, an alternate food source of great nutritional value to the world as a gift from the Andes. Having the INIAF as an executive branch, a series of activities are being developed to increase agricultural production and consumption of this ancient grain.

One of the most recent activities that had the greatest impact on the national population was the “Quinoa Route 2013”, which highlighted various communities in the provinces of La Paz, Oruro, and Potosí. Along the route, the caravan was able to interact with communities of producers, exchanging traditions, dances, cultures, ancient knowledge and culinary art based on quinoa, besides enjoying the colorful tourist attractions of each region, and of course with the participation of local, state and national authorities as well as those visiting the quinoa producing regions for the first time. This first experience brought along with it many learning opportunities about Bolivian reality and the work that is being carried out by the INIAF.

Among other activities, open field dissertations are being promoted regarding the subject of agricultural experience, with the producers themselves explaining the process of planting, caring and harvesting of quinoa, broad bean, and potato among others. This activity has been given the name of “field days” and it is being carried out by the INIAF project “Semillas Andinas” with financing from the world Food and Agriculture Organization (FAO).

In summary, the National Program of Quinoa Research has as its main objective to develop technologies which are oriented towards the integrated management of the quinoa agro-ecosystems, which contributes to the productivity and profitability of this species, complying with the institutional and sector goals in benefit of farmers and the Bolivian population.

Among the first results of the National Quinoa Program is the selection of the 4 varieties/ecotypes with higher than average yields, and “clean” types (two varieties).

There is a Plan for Execution of the program that proposes the creation of an International Quinoa Center. The inscription in the registry of the varieties of Quinoa has also been achieved as follows: White Royal Quinoa Puñete, White Royal Dedo, Pandela, Pisanck’alla, White Royal Chojillo, Huallata and Toledo.



The INIAF is the depository for the Genetic Resources of the Plurinational State of Bolivia. At the Experimental Center of Toralapa in Cochabamba, 15 thousand accessions are preserved. In the last few years, Bolivian scientists have been able to generate and liberate new high-yielding varieties, among which are: the “Marcela” potato, the “Altiplano” carrot, and the “Globosa” onion.

The INIAF, in these 4 years of institutional life, the last one under the direction of Mr. Lucio Tito, has consolidated itself as a referential institution which is leading the agro-productive sector of Bolivia to have a major incidence in the food security and sovereignty of Bolivians. At the same time, it can facilitate access of producers to technical assistance services, innovation, research and the use of certified seeds based on their needs.

Quinoa (Chenopodium Quinoa Wild) is a native grain of the Altiplano region of the Andes Mountains. Traditionally, it grows in arid and semi-arid lands, with an ample genetic variability of more than three thousand ecotypes and with a capacity to adapt to climatic adversity and diverse ecological grounds ranging from sea level to more than 4000 meters in altitude.

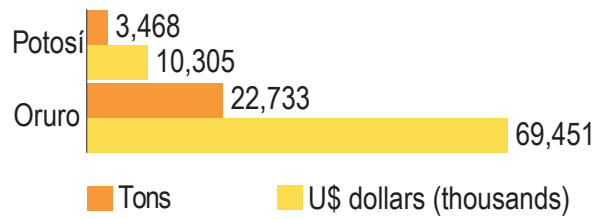
Quinoa is an alternate strategic food which has the potential to contribute to the food security and nutritional stability of humanity which is why it has become a “Gift from the Andes to the World”.



Source: Ministry of Rural and Territorial Development, International Technical Assistance.

Bolivia: Quinoa exports by Department

Expressed in value (thousands of U\$ Dollars) and volume (tons)

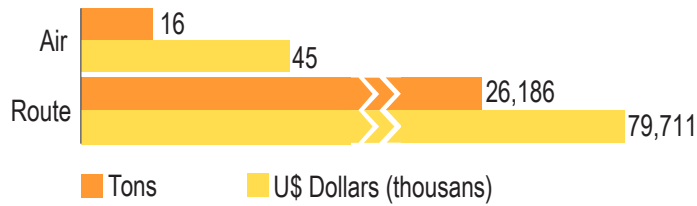


Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Bolivian quinoa exports data show that the Department of Oruro exports 69,451.000 U\$ Dollars, (equivalent to 22.7 thousand tons in volume), and the Department of Potosí exports 10,305,000 U\$ Dollars (3.5 thousand tons).

Bolivia: Quinoa exports by means of transport

Expressed in value (thousands of U\$ Dollars) and volume (tons)

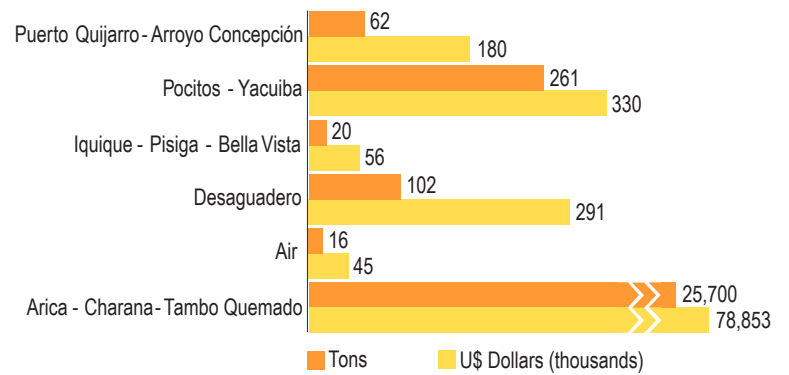


Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Likewise, 99.9% of quinoa exports took place by land routes, and only 0.01% by air.

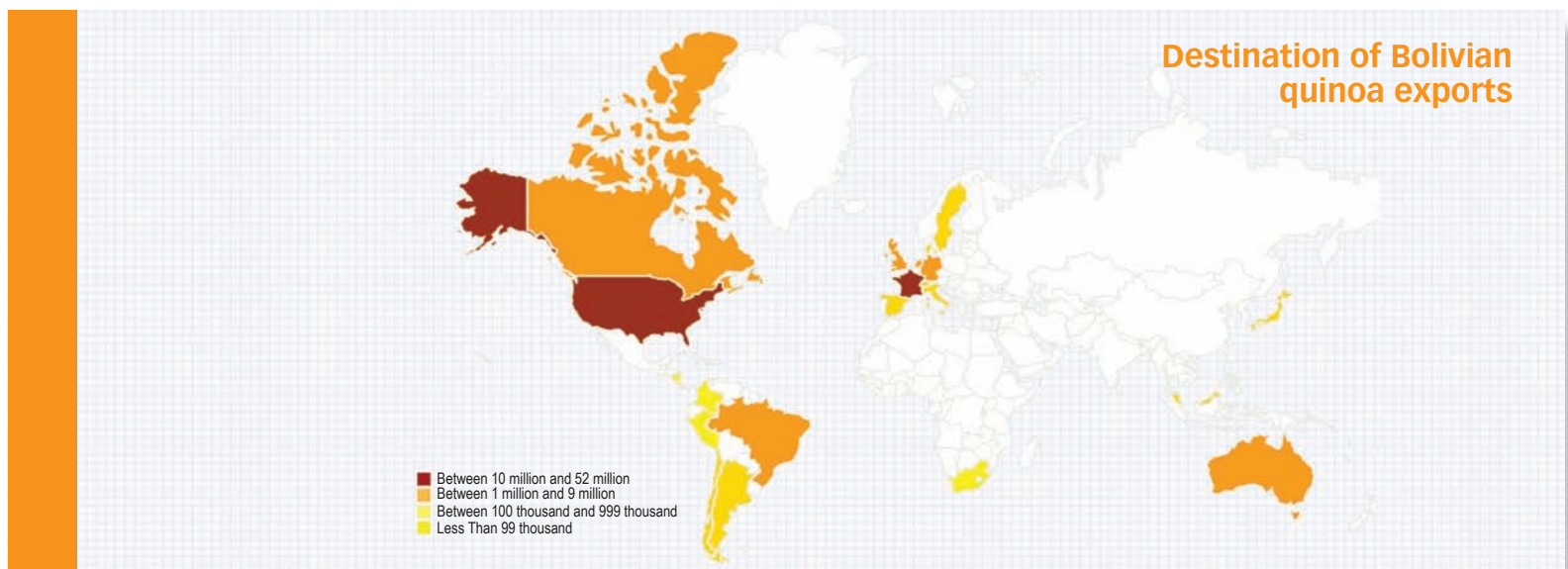
Bolivia: Quinoa exports by exit point

Expressed in value (thousands of U\$ Dollars) and volume (tons)



Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Additionally, quinoa exports have as its primary exit point Arica-Charana-Tambo Quemado (representing 98.7% of total exports in 2012).

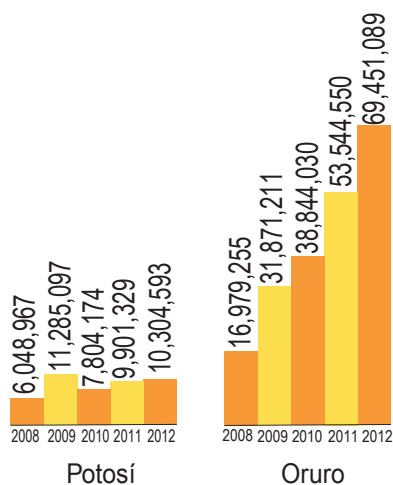


Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Evolution of bolivian quinoa exports

Bolivia: Quinoa exports by Department, 2008-2012

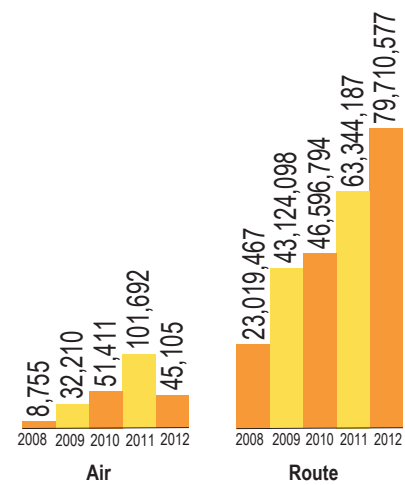
Expressed in volume and U\$ Dollars.



Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Bolivia: Quinoa exports by means of transport, 2008-2012

Expressed in volume and U\$ Dollars.



Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

TRAVELER'S INFORMATION

National Customs Office on General Customs Legislation's framework, Tributary Code and its regulations establish that it **will control international passenger means of transportation** (including tourist services which provide Close Tour passengers transportation), traveller's baggage and packages transported by these means.

International traveller

All international travellers entering to Bolivian territory (by air or road), must fulfill the following customs formalities:

Mandatory filing forms

- **"Baggage Declaration"** Form, for the baggage you are with.
- **"Cash Declaration"** Form, to declare cash entering or leaving for any currency.



Exceptionally

- **"Temporary Entering Admission of Goods and Travellers"** Form, when travellers participate in cultural, scientific, recreational events and/or other recreational purposes, which are sponsored by Bolivian State's public institutions, diplomatic missions or international organizations accredited in the country, may temporarily entering with goods intended for such events.
- **"Temporary Entering Admission of Goods and Travellers with labour purposes by road"** Form, when travellers entering to Bolivia temporarily, as long as the traveller has an employment contract or a visa with a specific purpose to carry electronic items, computers or tools which constitute a work instrument to develop their profession or job.



- **"Temporary Leaving Admission of Goods and Travellers by road"** Form, when Bolivian tourists leaves the national territory in order to participate in cultural, scientific, recreational events and/or other recreational purposes.

Franchise "Accompanied baggage"

All international travellers (Bolivian or foreigner) would carry to national territory without custom taxes payment as accompanied baggage the following:

- **Personal use and consumption goods** used in the travel with the main feature that these are **"used"**.
 1. A camera;
 2. A personal computer;
 3. A video camera and accessories;
 4. A Recorder, recording radio or radio receiver;
 5. A mobile phone;
 6. Sports items;
 7. Portable musical instrument;
 8. Strollers, wheelchairs for disabled people and other goods for personal orthopaedic use.
- **Strict personal use or consumption new goods**, with no commercial purposes, \$us 1,000 top worth and the following constraints:
 1. No more than three (3) liters of alcoholic beverages;
 2. No more than four hundred (400) cigarettes;
 3. No more than fifty (50) cigarettes or five hundred (500) grams of chopped tobacco.



FRANCHISES WILL NOT BE APPLIED WHEN: (NON-CUSTOMS TAXES PAYMENT)

- When it will pass a period less than 90 days since last time you entered to country.
- When new goods exceed \$us. 1.000 on franchise, the traveller (Bolivian or foreign) should pay custom taxes for those when it corresponds.
- When **Alcoholic beverages, cigarettes, chopped tobacco** exceed the established franchise will be confiscated, according to Bolivian Regulations.

INFORMATION TO:

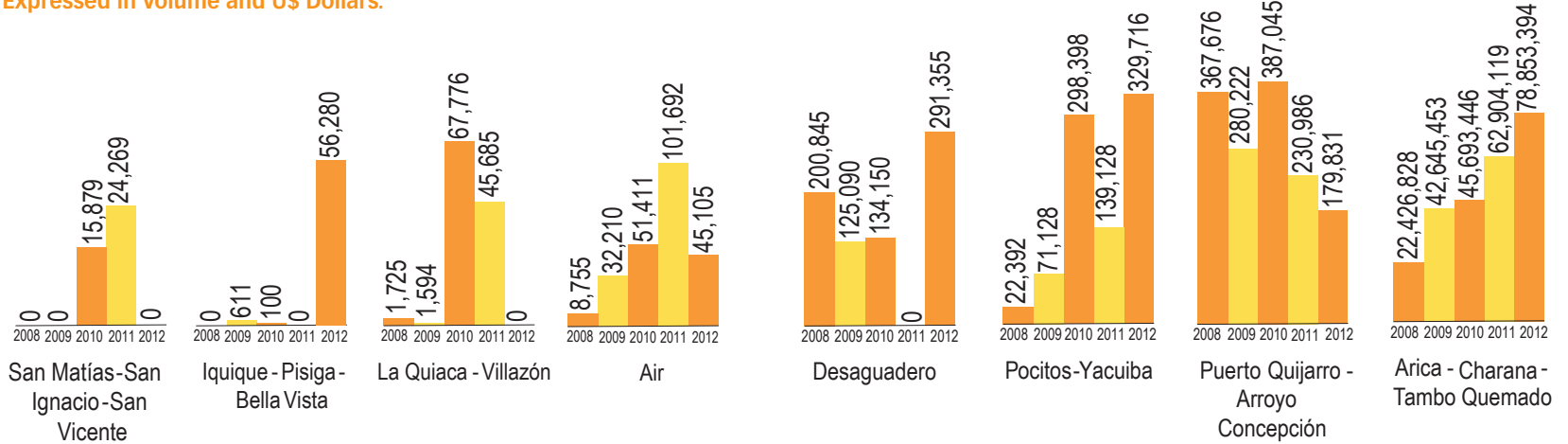
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Bolivia: Quinoa exports by exit point, 2008-2012 Expressed in volume and US\$ Dollars.

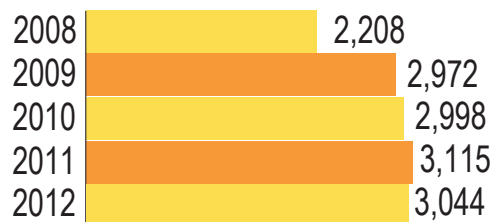


Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

Evolution of prices

Despite world promotion of quinoa in the international market, the net value of production does not reach 1% of the Gross Domestic Product (GDP); nevertheless, quinoa exports occupy the sixth position among non-traditional export products in 2012.

Bolivia: Reference price evolution Expressed in US\$ dollars per ton (USD/ton)



Source: INE / Elaborated by Instituto Boliviano de Comercio Exterior

For 2008, the price per ton of quinoa exported from Bolivia abroad was USD 2,208 per metric ton. Comparatively the reference price as of 2011 was USD 3,000 per ton, an amount that in 2012 has been maintained.

The price paid to farmers in the Challapata market (Eduardo Avaroa Province in the Department of Oruro) for Organic White Royal quinoa is USD 1,264.4 per ton, Black Royal quinoa placed in this market has a value of USD 2,083.3 per ton, and the price for White Royal quinoa at the same location is USD 1,293.1 per ton. (Source: ANAPQUI, March 3, 2013.)

Prices for Certified Products

Fair trade represents an alternative to conventional trade and is based on cooperation between producers and consumers. Fair trade offers producers a fairer treatment and trade conditions that are more advantageous. This allows them to improve their quality of life and make plans for the future. For consumers, fair trade is just an efficient way of reducing poverty by means of their daily purchases.

When a product carries a certification seal of fair trade, it means that the producers and the traders have fulfilled the fair trade criteria and requirements. These criteria are destined to correct the power imbalance in commercial relationships, the instability of markets and the injustices often found in conventional trade.

The minimal fair trade prices have been defined for processed quinoa at an FOB level. For organic quinoa, the minimal fair trade price has been established as USD 2,600 per ton and for conventional quinoa (nonorganic) at USD 2,250 per ton. It is worth noting that these prices apply to all types of quinoa, without making a distinction between white, red or black quinoa. In addition, these prices apply to all South American countries.

The fair trade premium for organic and conventional quinoa has been established at 10% of the minimum fair trade price, that is, USD 260 per ton of that USD 260 per ton at least 30% (USD 78/ton) are for investments in sustainable environmental measures.

The conditions required for commercialization of fair trade products state that when the market price is higher than the minimum price, producers must receive the current market price or the price negotiated in the contract.

Markets that demand organic production require high quality certified products with total traceability of their products.



The table below lists the fair trade minimum prices and premiums:

| Product | Variety of product | Price applied to | Measure | Pricing level/ special pricing conditions | Minimum fair-trade priced | Fairtrade premiums | Valid since |
|------------------|-------------------------|------------------|---------|---|---------------------------|---|--------------|
| Quinoa (cereals) | Conventional, processed | South America | USD/TM | FOB | 2.250 | 260 (of which at least 30% has been invested in environmental sustainability) | 01 - Abr-12 |
| Quinoa (cereals) | Organic, processed | South America | USD/TM | FOB | 2.600 | | 01 - Abr -12 |

IICA SALUTES THE BOLIVIAN FARMERS AND INSTITUTIONS INVOLVED IN QUINUA PRODUCTION AND TRADE IN THE INTERNATIONAL YEAR OF THE QUINUA

The Inter-American Institute for Cooperation in Agriculture (IICA) is the specialized agency of the Inter-American System for the promotion of agriculture and rural well-being, and our efforts are fully focused on making agriculture competitive and sustainable in the Americas. It is our wish to play a tribute to all those involved in the production and trade of Bolivian quinoa.



IICA has not remained distant in this important International Year of the Quinoa and among several activities we co organized the Scientific Congress of Quinoa, which took place on June 14th and 15th in IICA's auditorium in La Paz. 62 articles, written by 129 researchers, mostly Bolivian, were presented and discussed in the congress. The proceedings of this important meeting have been published in a book that is now available to the scientific community.






Since our founding, in 1942, we have acquired a wealth of experience in the provision of technical cooperation in the areas of technology and innovation for agriculture, agricultural health and food safety, agribusiness, agricultural trade, rural development and training.

Faced with such extraordinary challenges, we propose a new paradigm for agriculture: one in which the sector will improve national revenues and individual incomes, play a key role in making food security a reality, and is a line of defense in mitigating the impacts of climate change. We are committed to making agriculture more productive, more inclusive and more sustainable.

In Bolivia as in all our 34 Member States, we work very closely with the Ministry of Rural Development and Lands. Our office in Bolivia has drawn a Country Strategy which is carefully executed under the supervision of the national authorities. Of course being quinoa an important crop in Bolivia part of our activities have been focused on it.

IICA's governing body is the Inter-American Board of Agriculture (IABA), comprising the ministers of agriculture of the hemisphere. In addition, we serve as the secretariat of the Meeting of Ministers of Agriculture in the Context of the Summit of the Americas Process.



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PROINPA'S commitment to a sustainable system for quinoa in the bolivian altiplano (highlands)

The great international demand for quinoa due to its excellent attributes, plus the extraordinary prices that are being offered, have generated a rapid expansion of the crop which in turn has led to criticisms in the last few years regarding quinoa production; among those criticisms are issues such as the indiscriminate expansion of the agricultural frontier, significant reduction of the population of camelids, that soils are losing their productive capacity and that they are undergoing an erosive process, etc.

Various groups in Bolivia as well as international press articles tend to highlight the problems, without putting forward initiatives or actions to resolve them, or they ignore those important steps that are being taken in terms of the generation of solutions. PROINPA has assumed the challenge of finding solutions, based on scenarios available in the highlands itself, that is to say, in the very ecosystem where quinoa is grown. This is possible thanks to the valuable economic support of the Royal Embassy of Denmark, and cooperation from the Netherlands, the McKnight Foundation and the technical coordination with professors from the University of Copenhagen.

Native Species and Quinoa Ecosystem

The native species that share the quinoa ecosystems are shrubs, legumes, and grasslands that fulfill various roles in the quinoa and camelid ecosystem. These provide great benefits such as: cover vegetation and protection against erosion, they generate organic material and nutrients for quinoa, they fix atmospheric nitrogen, they are an important source of fodder for domesticated and wild animals, they provide shelter for the natural enemies of plagues that affect quinoa, they provide a substratum for beneficial microorganisms, they capture CO2, and they are part of traditional medicine. Some examples of these are the following: Uma t'ula (*Parastrephya lucida*), Sup' u t'ula (*Parastrephya lepidophylla*), Nak'a t'ula (*Baccharis incarum*), Lamphaya (*Lamphaya castellani*), Tara-tara (*Fabiana densa*), Q'ila-q'ila o Salqa (*Lupinus sp.*) and grasses of the Nassella, Festuca, Stipa gender amongst others.



These species have been barely studied and have not been domesticated; therefore, for their management appropriate technology needs to be developed especially in the context of climate change. On the other hand, the dynamics of quinoa production does not allow them sufficient time to multiply or re-establish themselves.

Within this context, the purpose of PROINPA is to help these species multiply and be massively reintroduced into the quinoa-camelid ecosystem, thus maintaining their role in balancing the system.



In the academic environment very little information is available regarding native species; nevertheless there is an extensive local and ancestral knowledge which is barely documented regarding their uses as fodder or medicine or their optimal growing and reproduction conditions. Over the last two years seeds have been collected from these wild native species and their physiology and reproductive biology has been studied.



These basic studies have allowed for their massive reproduction as well as providing seeds for thousands of hectares.

On the other hand, these studies have permitted the development of new methods for large-scale planting on the basis of technology using specific seed beds, direct sowing techniques and the development of equipment to mechanize this process.



The new vision for a sustainable quinoa ecosystem has to take into account, amongst others, the following aspects:

a) Crop rotation with multipurpose species and inclusion of resting periods to improve soils

There are various options utilizing native species. Q'ila-q'ila or wild tarwi, a native legume which tolerates frosts and drought, especially stands out.

The Q'ila-q'ila naturally enriches the soil, contributing organic matter when incorporated. Its roots present good bacterial populations which fix atmospheric nitrogen, and its biomass can be used as fodder.



b) Live vegetation barriers

The T'ulas, Tara-tara, Lamphayas and grasses are natural live vegetation barriers in the highlands. The expansion of the agricultural frontier has considerably reduced them and they therefore have to be repopulated. There has been success in planting them directly and transplanting them from nurseries.

Besides PROINPA, there are existing nurseries which are promoted by the Government of the Department Oruro and the Technical Oruro University (UTO), which shows the concern of Bolivian institutions regarding the issue of sustainability of quinoa. Live barriers help reduce the speed of winds as well as the loss of soil particles which are rich in nitrogen content; the width of quinoa parcels should not exceed 60 meters and the inter-parcel strips should be repopulated with multipurpose native species.

On the other hand, live barriers favor populations of beneficial organisms, which play an important role in controlling quinoa plagues. For example there is parasite symbiosis with the Copidosoma wasp, which kills 50% of the larvae of quinoa-moth. These wasps are benefited by the flowering of diverse native species.



Trade Fair Schedule

 **Fiacruz 2014**

FEBRUARY 19 - 23

FICAD 2014

International Construction, Architecture and Design Fair
MARCH 26-30


agropecruz 2014

APRIL 8 - 13


9th Women's Integral Fair 2014

MAY 7 - 11


EXPOFOREST 2014

JUNE 18 - 21

 **expocruz**
2014

19-28 september

expo
mype
2014

NOVEMBER 7 - 9


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C) Grassland repopulation

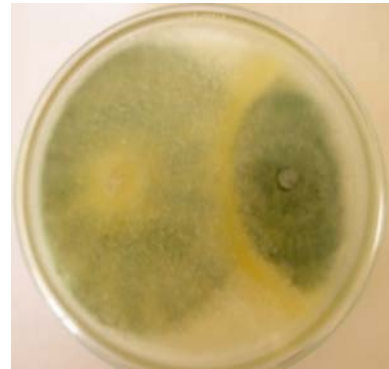
A great option is the use of the Nassella and Festuca grasses. In the highlands there are various ecotypes such as needle grass, purple grass, Khachu, etc. These have the virtue of being totally adapted to the highlands; being able to withstand harsh winters and being a forage and fodder that "llamas" like to eat. These grasses are multiplied by clusters in important quantities and they have been successfully reintroduced into the surrounding prairies in the regions of quinoa production.



The grasses are essential to the success of repopulation of camelids, a great alternative to improve the animal's carrying-capacity. The idea is to pass from a relationship of one (or none) "llamas" to two or three per hectare, which represents additional volumes of manure, a major requirement for sustainable quinoa production.

d) Microorganisms

Despite the cold conditions of the highlands, numerous beneficial microorganisms have been isolated both from the roots of quinoa plants and the soils in which quinoa is produced. This richness represents a great option for improving the health of the soil, multiplying them artificially and reintroducing them. As a result, various native stocks of the Trichoderm mushroom and the Bacillus bacteria are now available, both of which act as growth promoters, as bio-controllers and activators of the anti-stress mechanisms of the plant, recycling soil nutrients, etc. Bacteria of the Rhizobium gender have been isolated from the Q'ila-q'ila, as well as mycorrhizae from the T'ula shrub, which favors faster and more abundant growth.



In Summary

Quinoa's success has generated difficulties, which can be resolved. The extreme conditions for agricultural production in the highlands drives us to find solutions in the native species that grow in the same agro-ecosystem as quinoa, and the valuable ancestral knowledge that we have in our farmers/producers. The plants which could be part of the solution are now wild but will be progressively managed and domesticated to make their use more manageable. At this time, we have to multiply them so they can be replanted. These initiatives should take us to a sustainable system, where there is a balance between quinoa, the camelids, wildlife, and also one in which the insect and microorganism populations are promoted.

For more information, please visit the website of PROINPA Foundation: www.proinpa.org

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Developing sustainable technology for quinoa production in the arid soils of the Bolivian Altiplano (highlands)

CPTS: 10 years contributing to improving Bolivian quinoa production

In the last 10 years, there has been no agricultural product that has had the dynamics of Royal Quinoa. Export volumes have gone from 2,000 tons per year to 26,000 tons per year, the value of exports has gone from USD 2 million a year to USD 80 million a year. Quinoa has become an adequate food source in the world for people with celiac disease (digestive problems when consuming grains), and it is now a part of the culinary offer in the best restaurants in the world, all of which explosively increased the demand for this grain in the international market.

It is also worthwhile highlighting that during this time Bolivian institutions such as the Center for the Promotion of Sustainable Technologies (CPTS) with the support of international cooperation such as the Royal Embassy of Denmark, have carried out research whose results have allowed for the development of technology both for the transformation (an exhaustive cleaning process) of this grain, as well as extensive agricultural production, which allows sustainable sowing and growing of quinoa in the arid soils of the Bolivian highlands, and also giving an opportunity to the more humid zones with their relatively fertile soils, so that they can continue being used for diverse Andean crops in the arid highlands. The results that have been accomplished will allow the highlands region to become a new hub for development.

The problem, solutions and results

During 2002-2004, with the support of USAID and the Royal Embassy of Denmark, the CPTS carried out diagnostics for Cleaner Production (PML) in five companies which processed quinoa (ANAPQUI, IRUPANA, JATARY, Andean Valley and Cereales Andinos). This process of diagnosis revealed that the bottleneck for the development of the sector was a lack of technology for processing quinoa.

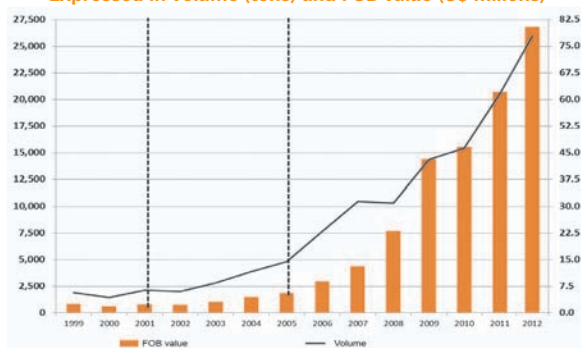
The CPTS faced the challenge and for a period of four years, supported by USAID and the Royal Embassy of Denmark, they developed a technological prototype which was installed in the company Andean Valley S.A. This company generated an entrepreneurial alliance with a Danish company (Program B2B) which allowed CPTS to optimize the technology that was developed for quinoa processing.

As a result CPTS was able to replicate the technology using a local partner, Complejo Industrial y Tecnológico Yanapasiñani (CITY). Currently CITY has installed 12 processing plants, each of which has a processing capacity of 2,500 tons per year which has allowed an increase in export volumes from 4,800 tons per year in 2005 (with a value of a little over USD 5 million), to 26,000 tons per year in 2012 (with a value of approximately USD 80 million).

Nevertheless, since 2006 it was foreseeable that the agricultural production of quinoa would become the new bottleneck for exports. Additionally, the expansion of quinoa crops was directed towards traditional humid soils which resulted in the substitution of other Andean crops, the invasion of natural grasslands and subsequent displacement of camelids and also the invasion of "bofedales" (high-altitude wetlands), as well as other types of wetlands. There was also evidence of the deterioration of soils of present quinoa growing areas with subsequent abandonment, a problem which became more important with the use of inappropriate technologies for quinoa production.

CPTS also faced this new challenge. For approximately five years and once again assisted by USAID and the Royal Embassy of Denmark, CPTS carried out research which led to the development of agricultural machinery; initially in the form of prototypes which in turn after having been submitted to various tests, resulted in final prototypes which are currently being tested in an experimental agricultural unit that has been implemented in the Ayamaya community. This new technology allows sustainable production of quinoa in arid lands of the Bolivian highlands giving an opportunity to the more humid lands which are relatively fertile to continue being used for diverse Andean crops and thus reverting the invasion of natural grazing fields, of "bofedales" (high-altitude wetlands) and wetlands in general.

Evolution of quinoa exports from 1999 to 2012
Expressed in volume (tons) and FOB value (US\$ millions)



Source: INE

The aforementioned technology is accompanied by proven methodologies for a) recovery of degraded and eroded soils, b) habilitation of arid lands, and c) sustainable management of those arid lands. This technology is applicable in Productive Agricultural Units of 500 hectares each, with 250 hectares in production and 250 hectares resting but under management and with the capacity of producing 250 tons of Organic Royal Quinoa per year sustainably.

Finally, during the last two years the CPTS has been developing a plural communitarian business model in which there is participation by the community, an investor, and an executor (who is counseled by the CPTS), and a processing company that has the responsibility of incorporating the community within its organic certification program, and to ensure the market for the total production. The net income from commercialization is distributed in accordance to predefined percentages.



Perspectives

Essentially the application of technology developed by the CPTS will allow:

1. Reduction of the pressure that Royal Quinoa crops currently exercise on threatened ecosystems such as "bofedales" (highland wetlands) and other wetlands in the southern highlands.
2. The production of Royal Quinoa in arid and semi-arid lands which are currently not used for any crop.
3. Certification of Organic Royal Quinoa production and traceability which will in turn be advantageous for the sustainability of export markets.

Future challenges

Amongst the most important:

1. Conclude the final validation tests which are currently being carried out with the technology that was developed by the CPTS.
2. Design and implement financing mechanisms for the implementation of production units.
3. Develop social economic studies that complement the technological development of the CPTS, within the plural communitarian business model that is actually being developed by the CPTS.

For more information, please visit the website of Center for the Promotion of Sustainable Technologies: www.cpts.org





Foto: IBIS (Inauguración - GUSTU Restaurante)

Gourmet quinoa in Bolivia? "Surely, Clearly, Precisely!", Claus Meyer

On the fourth of April 2013 the renowned international chef, Claus Meyer, inaugurated the GUSTU project, a restaurant in the city of La Paz, Bolivia. Taking advantage of this opportunity IBCE carried out an interview with the expert that revolutionized the concept of Danish culinary art. Claus Meyer told us that in Bolivia there exists a very interesting culinary potential, that could be developed into something fantastic and potentially put the country cuisine among the top ones of the world.

Could you please give us a brief overview of your professional career?

I began my first company when I was 25 years old, while I was still studying at the business school in Copenhagen. When I was a 20 years old, I already knew that I was a person that wanted to change the culinary world. So my entrepreneurial undertakings have never been driven by generating profit, but rather they have always been focused on doing something interesting. From the time that I was 25 years old, I have been doing the same thing; I have created 15 companies, all of which have the same objective, to make a contribution to the culinary world and not so much focused on about generating profit.

I am currently involved in the production and milling of grains, and transformation of food products. I have a friend who has a vinegar company and a company that imports green coffee beans from Bolivia which are being roasted in Denmark. As well as fine dining restaurants, I have some cafés and bistro's. I serve lunch to about 14,000 people per day.

The most interesting of the restaurants has been NOMA in Copenhagen, not only because it has received foreign investment, or because it sells local products, but rather that it has generated a movement which has had an effect which could be compared to a super avalanche, like a snow avalanche in Copenhagen and in the whole Nordic region. This restaurant represents my own philosophy and has been a guiding light to others and has changed everything in the culinary world in my country Denmark.



Some of the effects have resulted in a total change in various aspects, such as the production of food and its manifestation, the way in which it expresses itself in a philosophy, in a way that could be compared with DNA. Other people and other companies have also used this philosophy to obtain the same results; they use it as an example. A lot of it has to do with changing the demand; if you can change the demand with a smiling face then you can really generate change in society. The important thing in Denmark in 2002 was the enormous opportunity of a "win-win" scenario. It was possible to change the culture of cooking in order to have a positive impact based on the unity of the country and its pride, its health, its sustainability, tourism and food exports. If we are lucky, this example could become a change instrument. Using the power of food in Bolivia as an engine for equality, economic growth, social development, work and employment.

What motivated you to invest in Bolivia?

Speaking with a friend of mine, I realized that everything we developed within the realm of new Nordic cuisine, the manifest, the importance of local seasonal products- which has to be healthy and at the same time tasty-, could be used in other contexts. One could take away the word "Nordic" and the same vision could be developed in other countries, this tool to make fantastic cuisine could be exported to other countries.

I thought of what we could do with all we had learned – being happy in the long term, having the possibility of giving and creating things for other people – therefore, when developed a strategy of developing our concept in a country that is in the process of development, as a social project. We evaluated various countries, countries with high levels of biodiversity, with amicable people and safe countries where nobody is going to get kidnapped. But at the same time a country with stability and a reasonable investment climate. I also had also been talking with the representative of IBIS which had worked in Bolivia for many years and we came to the conclusion that Bolivia was a good option. Additionally, Bolivia has a long term history in pre-Columbian cuisine and products that are not available in other countries which makes it very interesting.

What is the public that your restaurant aims to serve?

I would like it to be for a very broad public, if possible for everyone in the world but we only have 100 chairs. I would like to see that GUSTU will have the same impact here as my restaurant NOMA has had in Copenhagen. The food has to be of excellent quality, and as consequence it will not be possible for all the citizens of Bolivia to be able to eat here. I do believe that of the population of La Paz we could perhaps serve approximately 50,000 people. To provide them with a good culinary experience and responding to their expectations. Additionally, we hope that people from other parts of the world would come here because what we will be able to serve them dishes and products they will not be able to find anywhere else. A dinner or three course lunch will cost around 35 dollars and a specific plate 7 dollars.

However, we are also thinking about offering free food every once in a while and to provide free cooking lessons in the city of El Alto

What is your opinion of Bolivia cuisine? Could it become as famous as others, for example de Peruvian cuisine?

I believe that Bolivian cuisine has a lot of potential. There is a reason why there is a lot of talk about Peruvian cuisine, because they have raised it to a very high gastronomic level. Since very little is known internationally about Bolivian cuisine, there is a potential that it can be developed into something fantastic. Definitely it has all of the prerequisites to full fill its promise to be an international level cuisine, to be one of the best in the world, its very varied climate zones, high level of biodiversity and its history regarding ancestral techniques. Combining all these aspects generates the potential to create a gastronomical level that can become one of the greatest in the world.

Conceptually, what would make Bolivian cuisine different in relationship to that of other countries?

One of the fundamental things is the commitment to the use of only local products, from the different regions and secondly being able to combine products that cannot be found elsewhere. As a result generating combinations which are unique, combining fruits from the Amazon with llama meat, quinoa or the enormous variety of potato that exist.

What do you expect from Bolivia and what would your contribution to the country?

One of the things, - although I may not be able to accomplish everything that I want, is that I would like to help someone, at least one person, the most important thing that I brought with me is this feeling that I have, that while I'm here amongst this incredible reality which I could bring into the light of eternity. I am doing the best I can and that gives me an emotion that is quite good and rewarding

Many times I have left Bolivia behind with tears in my eyes, tears of joy, the result of the impact that the Bolivian people have had in my life. I have invested many hours in the project, I have also donated USD 800,000 that I will never see again and I'm totally satisfied with this, I am a curious person.

With such a large investment, of course I can think that it's not worthwhile even though I have not thought about it very much, I do hope to have a positive impact in the food movement, to obtain a gift that is the result of a gift, to imagine the impact in the world and for the people, if things can work out.

What opinion do you have of the quality of Bolivia's organic quinoa?

Although I am not an expert in quinoa, I like its consistency, its smell and its flavor, it is a very versatile grain in the sense that you can eat quinoa instead of meat, clearly, it is a very healthy cereal and that is what I think about quinoa.

Are you going to develop some gourmet foods based on quinoa?

Surely, Clearly, Precisely!

Should Bolivia gamble on quinoa?

There is no reason not to invest and bet on the future production of quinoa. Bolivian quinoa could be compared with the grapes from France.



**Calle 10 No. 300.
Calacoto, half a block from Av. Costanera
La Paz - Bolivia**



PRODUCTIVE DEVELOPMENT BANK: Providing support to small and medium producers

The Productive Development Bank (BDP S.A.M.) is a "second tier bank", a financial intermediation entity whose aim is to promote and strengthen the national productive sector; 80% of the entity belongs to the Bolivian government and the remaining 20% to the "Corporación Andina de Fomento" (CAF).

BDP SAM's mission is to support the productive development of the country in order to generate incomes and employment, thus reducing the inequalities in its plural economy, seeking to create value, product diversification, food sovereignty and the preservation of the environment. In order to do that, the bank channels financial and non-financial services in order to promote and support the different sectors and players in the plural economy and the development plans of the Government.

Within this framework BDP S.A.M. has designed a series of products and services that range from credits to financial entities, sectorial loans, trust management and warrant funds, and even non-financial services.

Types of loans by BDP S.A.M

Fiduciary Fund for Productive Development (FDP)

The Fiduciary Fund for Productive Development provides loans which are destined to small producers, who do not have access to loans in the commercial market. FDP provides individual loans (CPI) and associated loans (CPA) which articulated with organizations of producers to provide better financial conditions. Until February of this year, the fund has emitted loans for a value of Bs 1,488,491,277. The individual productive loan—CPI—is granted to micro or small production units and entrepreneurs, whether rural or urban. These can be individual persons or legal entities.

The activities that FDP supports are agriculture, cattle production, food processing, fishing, carpentry, metalworking, garment manufacturing, weaving, handicrafts, pottery, jewelry, communitarian tourism and others. Loans from this fiduciary fund are targeted towards the purchase of raw materials (threads, wood, wool, leather and other supplies).

Warrant Fund (FG)

Within the offers of the bank, a guarantee fund has been incorporated, which facilitates the access to loans and improves the financing conditions of micro and small productive units (micro and small companies, associations, OECAS cooperatives) that cannot have real guarantees/collateral or have insufficient guarantee/collateral.

The trust fund allows guarantees of up to 50% of the projected loan to working capital and investments for production, transformation and commercialization and services that are related to the activity and or production infrastructure.

To this date, the approved portfolio amount with an indexed coverage of 50% of the credit loan reaches the amount of Bs 6,909,300 being able to move a total amount of Bs 13,818,000 of loans that have been approved for micro and small production units through those financial entities that are eligible through the fund.

Sectorial loans

Sectorial loans have been custom-designed for the needs of the producers and their activities, benefiting the sectors that produce quinoa, sugarcane, sesame, grapes, grains and poultry, using the figure of a trust fund where the BDP is the trust beneficiary. To date the invested amount is Bs. 241,351.037.

Organic quinoa sector

This loan is destined to quinoa producers, and is designed to improve the production of environmentally-friendly organic quinoa. The financing focuses on the purchase of camelids, natural fertilizers, equipment, machinery, agricultural implements and others and also the construction or improvement of housing and productive infrastructure.

Poultry sector

This loan is destined to producers that are dedicated to poultry production and is designed to improve production, expansion or improvement of the infrastructure for raising poultry, storage systems, incubation plants, poultry slaughterhouses, and the purchase of machinery, equipment and tools related with poultry production.

Vineyard sector

This loan is directed to the grape-producing sector, for small and medium-sized companies that have been constituted as civil and commercial associations, that have a solid and proven experience in the activity to be financed and that find themselves in the preliminary stages of production, transformation and commercialization.

Grain sector

This is directed to small individual producers that have solid experience in the activity of wheat, corn, rice, sorghum, sesame seed and beans to improve the production of the sector. This type of credit offers financing for the purchase of machinery, agricultural equipment, tools and productive infrastructure, as well as operational capital for the purchase of agriculture supplies as well as rental of machinery and or agricultural equipment.

Trust fund for financing exporters and suppliers of services to the government (FEPROBE)

These are loans that are directed to exporters and governmental suppliers, individual producers (male and female) or others who are associated. This trust is a financing solution to micro and small producers in rural and urban areas.

Trust fund for livestock settlement and resettlement (FIPOREGA)

The Trust Fund for Livestock Settlement and Resettlement (FIPOREGA) finances small- and medium-sized producers that are involved in beef production or milk production, issuing loans exclusively for the acquisition of livestock. Currently it has 498 clients with a total invested amount of Bs. 38,212,135.

Financial education

As of 2012, BDP S.A.M. began offering non-financial services aimed at improving the skills of small male and female producers to improve their productive units in technical and administrative aspects as well as the management of their loans. Up until March of this year the financial education program executed 215 orientation workshops addressing loan/credit responsibility throughout the whole country, reaching approximately 5,583 people from different productive organizations.

Venezuelan trust fund

Provides liquidity to Bolivian export companies which have been legally constituted and that can show that they have an export contract, purchase order or invoice, or a drafted quote invoice for value-added manufactured goods for the Bolivarian Republic of Venezuela, and that by the same token have the direct authorization from the Venezuelan importer as well as a contract of irrevocable cession of rights of credit that the exporting company will subscribe in favor of BDP S.A.M. To this date, disbursements amount to Bs. 15,758,129.62.

Additionally BDP S.A.M. is managing a total of 17 public and private trust funds, with autonomous assets of Bs. 7,256 million, directed to support different national policies, among them the payment of the "Juancito Pinto" Bonus.

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