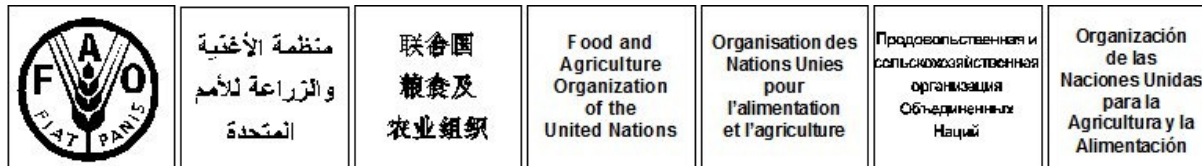


June 2011



CONFERENCE

Thirty-seventh Session

Rome, 25 June - 2 July 2011

Proposal by the Government of Bolivia for an International Year of Quinoa

Executive Summary

This document presents a proposal by the Government of Bolivia that 2013 be declared the International Year of Quinoa. The Government of Bolivia is seeking endorsement by the FAO Conference for this initiative. If endorsed, the Director General of FAO would request the Secretary-General of the United Nations to invite the General Assembly to declare 2013 as International Year of Quinoa.

The main objective of this initiative is to promote the benefits, characteristics and potential use of Quinoa in the fight against hunger and malnutrition, as a contribution to a global strategy on food security. The proposal sets out the benefits associated with quinoa and a programme of activities beginning in 2012 to support research and further development on its uses as well as a series of five international events to be convened during 2013. The estimated budget required to support this programme of activities is in the order of USD 10 million. A further USD 1.5 to 2 million would be needed to establish an administrative secretariat within FAO to oversee the further development and delivery of this initiative. The funds to establish the Secretariat would need to be available before the process was initiated. The Secretariat could be based in either FAO Headquarters or in the Regional Office for Latin America and the Caribbean in Santiago, Chile.

This document identifies a set of issues that the Conference may wish to take into account in its deliberations concerning the level of support for the proposal, the availability of funds for its delivery, and the possible role of FAO. *Annex 2* contains a draft resolution submitted by Bolivia.

Suggested action by Conference

The Conference is invited to:

- Review the proposal made by the Government of Bolivia to declare 2013 the International Year of Quinoa, including the technical and funding aspects involved, taking into account the level of support for the initiative among Members and other stakeholders (international organizations, civil society and the private sector);
- Seek such clarification and provide such guidance on the proposal made by the Government of Bolivia as deemed appropriate;
- Consider the desirability of endorsing the proposal to declare 2013 to be the International Year of Quinoa, as proposed in the draft resolution in *Annex 2*.

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I. Background

1. The Government of Bolivia has proposed that 2013 be declared International Year of Quinoa (IYQ). The main objective of this initiative is to promote awareness of the benefits, characteristics and potential use of Quinoa (*Chenopodium quinoa*) in the fight against hunger and malnutrition, as a contribution to a global strategy on food security.
2. The Government of Bolivia is seeking endorsement by the FAO Conference for this initiative. If endorsed, the Director General of FAO would request the Secretary-General to invite the United Nations General Assembly to declare 2013 as International Year of Quinoa.
3. The text of this proposal, as presented by the Government of Bolivia, is annexed to this document. The proposal foresees a programme of work that would begin in the second quarter of 2012 and run through 2013 at an estimated cost of USD 10 million.

II. Administrative and financial implications for FAO

4. At the request of the Government of Bolivia, FAO has provided technical information regarding the benefits, characteristics and potential use of quinoa. The declaration of the IYQ would have budgetary implications for FAO as, in collaboration with partners, FAO would be the lead UN agency in its development and implementation. From experience gained, most recently with the International Year of Natural Fibres (IYNF, 2009), further extra-budgetary funding of USD 1.5 - 2 million would be required to establish an administrative secretariat in FAO, supported by project staff and consultants. The Secretariat could be established in either FAO Headquarters or in the Regional Office for Latin America and the Caribbean in Santiago, Chile with technical support from Headquarters. The Secretariat would support further resource mobilization meetings with potential donors and private sector stakeholders. It would also have the responsibility to coordinate international action; to build an alliance of international and national organizations; to prepare communications materials, provide international communication/media coverage, and plan/host events.
5. In this regard, the estimated overall cost of the proposal by Government of Bolivia would require extra-budgetary funds in the order of USD 11.5 - 12 million over three years.
6. These estimates do not reflect the in-kind contribution that would be provided by FAO through utilisation of the existing administrative framework, access to legal advice, logistical support from Headquarters, Regional and Sub-Regional Offices etc.

III. Issues for consideration by the Conference

7. The level of support for the proposal from other Members or organizations, including those in the Latin American and Caribbean Region, would need to be ascertained. Unlike IYNF, the current proposal has not been discussed in any intergovernmental process or technical governing body, such as the FAO Committee on Agriculture (COAG). In view of the substantial efforts required to deliver a successful campaign, the Conference may wish to ensure broad support among Members and partners in the public and private sectors.
8. It is also important to consider the availability of the necessary extra-budgetary funds and the time needed to prepare for such an initiative. In this regard, the following should be clarified:
 - i) The extent to which the sponsors of the proposed activities, the Governments of Belgium and China, and possibly the United Nations Environment Programme (UNEP) and the European Commission, are prepared to provide human and financial resources to support this initiative.
 - ii) FAO is expected to be the lead United Nations Organization in the development and implementation of this initiative. Based on experience with the other International Years, most recently IYNF (C 2011/INF/15), this would require establishing an administrative

Secretariat with a total estimated cost of USD 1.5 - 2 million over three years. These extra budgetary funds would need to be available before FAO could commit to take a lead role in such an initiative. The proposal calls for a contribution of USD 250,000 from FAO in extra-budgetary funds for the design and maintenance of the Website, the source of which would need to be identified.

9. If the Conference decides to endorse this proposal, consistent with the Organization's efforts towards decentralization, consideration should be given to the Regional Office for Latin America and the Caribbean assuming a lead role in developing and delivering this initiative, with technical support from Headquarters.

Annex I

Plurinational State of Bolivia
Ministry of Foreign Affairs

Quinoa: ancient culture to contribute to global food security

Towards the declaration of 2013 as "International Year of Quinoa"

Bolivia, 2011

1. Programme activities and budget "International Year of Quinoa 2013"

1.1. General Purpose

Promote awareness of the benefits, qualities and potential of quinoa as an element to combat hunger worldwide given the exceptional nutritional qualities it presents. The dissemination of the above potential of quinoa crop will be carried out through support for research and development programmes and by conducting five international events at the UN headquarters in New York, Belgium, China, Kenya and Bolivia with the presence of experts in production, nutrition and marketing.

1.2. Programme of the International Year of Quinoa

The aim is to create awareness of the benefits of this crop and that it can help fight world hunger. In that sense the following activities worldwide have been organized, and will take place in centres of international renown. The scheduled events will take place in the months that correspond to the most favourable seasons in each country.

Activity 1: Event in Cochabamba - Bolivia

Bolivia is one of the main quinoa producing countries worldwide, it has the biggest genetic variation of quinoa and it is one of the leading exporters of this product. It is where food products derived from this crop can be found. It is where research has been done showing its adaptability to different ecological types, and production areas, varieties and production systems. An event in this country will show the world the progress that has been made in production and marketing worldwide.

Event in Cochabamba		
	From	To
Preparation Time	01/04/2013	30/04/2013
Event Time	01/05/2013	05/05/2013
Closing Time	06/05/2013	10/05/2013

Activity 2: Event in Nairobi – Kenya

Nairobi - Kenya is the headquarters of the UN Environment Programme. The production of food worldwide is affected by climate change, and it is through this organization that sustainable consumption and production is sought, thus making efficient use of resources. Because of its nutritional qualities, the production and consumption of quinoa in the world will help to fight world

hunger.

Event in Nairobi		
	From	To
Preparation Time	15/04/2013	15/05/2013
Event Time	16/05/2013	20/05/2013
Closing Time	21/05/2013	25/05/2013

Activity 3: Event in Brussels – Belgium

Brussels - Belgium, represents the political centre of the European Commission. Holding an event here will allow the political representatives of the European Union understand the importance of this product, as the member countries are also the main importers of quinoa worldwide.

Event in Brussels		
	From	To
Preparation Time	15/06/2013	15/07/2013
Event Time	16/07/2013	20/07/2013
Closing Time	21/07/2013	25/07/2013

Activity 4: Event at UN headquarters in New York

New York is the centre of UN meetings, therefore the representations of the world attached to the United Nations may attend this event and understand in a technical, cultural and scientific way the potential benefits of quinoa as a food. Based on this event delegations will understand the meaning and importance of the IYQ.

Event in New York		
	From	To
Preparation Time	01/07/2013	31/07/2013
Event Time	01/08/2013	05/08/2013
Closing Time	06/08/2013	10/05/2013

Activity 5: Event in Shanghai – China

Shanghai - China can be considered the commercial centre of Asia where the largest companies as well as major business centres of Asia are located. The event aims to show the potential of this food to enter the Asian diet. It is also a challenge to show the adaptability of this food in different cultures.

Event in Shanghai		
	From	To
Preparation Time	15/07/2013	14/08/2013
Event Time	15/08/2013	20/08/2013
Closing Time	21/08/2013	25/08/2013

Web site Design

The aim is to build a Web site as a central instrument for the dissemination of all activities of the IYQ available in all six official languages of FAO (Spanish, French, English, Chinese, Arabic and Russian) and designed to be a channel coordination of international events as well as a portal from which to download all the documents of an educational information system. The survey of information and the page layout will be undertaken in the second half of 2012, hoping that the Web site will be ready in early January 2013; the call for the design, launch and subsequent management (for the period 2013) should be in the second quarter of 2012.

1.3 Activities to support research, development and education in quinoa

Production of informative and educational documents

Efforts and resources will be allocated for the production of informative educational documents as they will have a key role in global awareness about the extraordinary qualities of quinoa. The development of these texts should be started in early 2012, given the need for them to be available for all events scheduled in 2013.

Scientific research and development of quinoa

Research funds will be available to universities, research centres and others to fund research projects in production and product development of quinoa. Calls for the assignment of research funds will be scheduled for 2012.

1.4. Activities to be developed at international events

One of the main activities proposed is holding conferences with the participation of scientists, officials, the private sector, civil society and anyone interested in issues of food crisis, food production and others. Initially we propose the following topics for conferences:

Conferences to create awareness of the benefits of quinoa as a staple crop

Title: "Quinoa: Its benefits in food and nutrition"

Nutritional aspects of quinoa

Economics of quinoa production, employment, use, ecology, demand for quinoa, organic farming

Lectures on the scientific nature of quinoa

Title: "Special scientific issues about quinoa"

The plant and seeds of quinoa

Chemical composition

Varieties of quinoa

Food and non-food uses of quinoa

Nutritional comparisons with other foods

Biodiversity and biotechnology of quinoa

Lectures on the production of quinoa

Title: "Production and economics of quinoa"

Technology of the quinoa crop: soil preparation, planting, development, care, fertilizer, irrigation and productivity, pest and disease management, harvesting, storage, soil conservation

World Economy Quinoa: Quinoa Producers and Suppliers Worldwide

World Economy Quinoa: Quinoa Consumption and Demand Worldwide

Lectures on the issue of food security and quinoa

Title: "Quinoa and fight against hunger and poverty in the World"

Food Crisis: Rising Food Demand, Issues of food supply and growing prices

Quinoa in the fight against hunger and poverty in the world

Quinoa and gender issues, poverty and malnutrition

Outlook quinoa (immediate, medium and long term)

Lectures on history and culture related to quinoa

Title: "El Grano de Oro de los Andes"

The Origins of Quinoa

The story of quinoa

Cultivation and consumption of quinoa today

Additionally, it is proposed to carry out various activities to spread quinoa consumption and production around the world; these activities would be conducted in parallel with the conference.

These include:

- a) Food festival
- b) Course and contest on making gourmet dishes based on quinoa
- c) Photographic exhibition of quinoa
- d) Artistic exhibitions
- e) Business round tables
- f) Children's activities.

1.5 Estimated budget

The Ministry of Foreign Affairs of Bolivia has been working on a bilateral basis to obtain financing in the countries and institutions where there will be events and resources for research and dissemination of quinoa. In this regard, possible funding sources for the events and activities are as follows:

Event at UN headquarters in New York

Funding has not yet been secured for the proposed Expo Quinoa.

Brussels – Belgium

Funding has been requested from the Commission of the European Union for the Expo Quinoa Belgium (please see budget below).

Shanghai – China

Funding will be requested from the Chinese government for Shanghai Expo Quinoa, (please see budget below).

Nairobi – Kenya

Funding will be requested from the United Nations Environment Programme for the Expo Quinoa in Kenya (please see budget below).

Cochabamba – Bolivia

The event in Bolivia will be financed by the State of Bolivia and will be held for 5 days in the city of Cochabamba, (please see budget below).

Web site

The proposed design of the Web site and its maintenance during the IYQ will be funded by. FAO would be responsible for designing and updating it with an estimated budget for this activity of USD 200 000. The publications and pamphlets in different languages to create awareness about the benefits of quinoa, the activities of the IYQ and its potential as a food to help fight hunger in the world are proposed to be carried out by FAO, the amount allocated should be the sum of USD 50.000 making a total of USD 250,000.

Support to research, development and education about quinoa

For these activities we propose that the funding will come from the Plurinational State of, Government of the United States, the Commission of the European Union, the Chinese Government and UNEP (United Nations Environmental Programme).

Budget for the events

SOURCE		Bolivia	Africa	UN Headquarters	Europe	China	FAO
		Government	UNEP	To be determined	European Commission	Government	
	CONCEPT	USD	USD	USD	USD	USD	USD
1	Conferences	279.150	805.700	989.600	1.082.425	1.220.500	
2	Gastronomic festival	241.250	347.250	475.750	475.750	475.750	
3	Course and gourmet contest	24.600	77.500	76.500	76.500	76.500	
4	Exhibitions	48.750	70.250	126.500	126.500	16.000	
5	Dances	146.000	146.000	158.000	158.000	158.000	
6	Business Round tables	54.660	70.160	106.860	106.860	106.860	

7	Activities for children	22.850	28.400	40.150	40.150	40.150	
8	Support for research, development and education about quinoa	265.500	265.500	517.500	517.500	397.500	
9	Production of educational documents	65.000	65.000	65.000	65.000	55.000	
10	Web site						250.000
	TOTAL	1.147.760	1.875.760	2.555.860	2.648.685	2.546.260	250.000

2. Background for the International Year of Quinoa

Quinoa (*Chenopodium quinoa*) is a small grain that has outstanding intrinsic qualities, among them: its genetic variability, a strategic gene pool to develop superior varieties (earliness, colour and grain size, resistance to biotic and abiotic factors, performance and grain products), its ability to adapt to adverse conditions of climate and soil where other crops cannot grow, harvest can be obtained from sea level to 4000 metres (altiplano, salt lakes, highlands, valleys, sea level), its nutritional quality represented by its essential amino acid composition in both quality and quantity, becoming a functional and ideal food for the body, the diversity of uses both traditional and non-traditional agro-industrial innovation and low cost production since the crop is not demanding in labour inputs.

Food and nutrition security

Due to population growth and the effects of climate change, most countries are facing difficulties in supplying food to their populations. Periodically and in many ways, FAO warns about the situation of food production, pricing and distribution. The situation of production and distribution of food in the world presents challenges of great magnitude to the four pillars of food security: availability, access, utilization and stability.

Faced with the global need to identify alternative products that have the potential to produce quality foods, quinoa is a crop with high potential nutritional benefits from both its versatility and its agronomic to contribute to food security and nutritional status of various regions of the planet, especially in those countries where the population has no access to sources of protein and or where they have limitations in food production, and therefore are forced to import or receive food aid. Quinoa is an alternative for these countries to have the opportunity to produce their own food.

Quinoa has a remarkable adaptability to different agro-ecological soil. It grows in desert to hot dry climates, the crop can grow with relative humidity from 40% to 88% and withstand temperatures from -4 ° C to 38 ° C. The plant is water use efficient, it is tolerant and resistant to lack of soil moisture; acceptable yields are obtained from 100 to 200 mm.

In 1996, quinoa was classified by FAO as one of the promising crops for humanity not only for its large beneficial properties and its many uses, but also as an alternative to solve the serious problems of human nutrition. NASA also included it within the system CELLS (Controlled Ecological life support System) to equip its spaceships in long-duration space travel because it is a food of excellent nutritional composition which shows that this crop is an alternative to solving the problems of insufficient protein intake.

Quinoa is a crop with high potential to contribute to food security and nutrition in various regions worldwide, especially in those countries where population has no access to sources of protein and/or where production conditions are limited due to low humidity, low availability of inputs or arid soils. In this context, quinoa for its nutritional values, medicinal and cultural, can be an important contributor

to the various "regional initiatives" in the context of food security and nutrition in developing countries.

Origin

The region of the Andes, the cradle of great civilizations, such as the Inca and Tiahuanaco, is considered the birthplace of many native species such as quinoa (*Chenopodium quinoa*). The crop was for thousands of years the main food of the ancient cultures of the Andes and is distributed in different agro-ecological zones of the region. Currently, the quinoa is in a process of expansion because it has great potential to improve the living conditions of people in the Andes and the modern world. For centuries, indigenous peoples have maintained, controlled, protected and preserved quinoa in different ecological zones, the different varieties in their natural state, through natural germplasm banks, based on the principles of complementarity, redistribution, and living in harmony with mother earth and nature.

Because of its high nutritional value for food, indigenous peoples and researchers call it "the golden grain of the Andes." It is one of the species becoming more and more important in the world, being used both in fresh and processed form.

Geographic distribution

The geographical distribution of quinoa extends from 5 ° north latitude in southern Colombia, to 43° South Latitude in the Tenth Region of Chile, however altitudinal distribution ranges from sea level to 4000 m. It is planted in the highlands shared by Chile, Peru and Bolivia, and there are coastal quinoa, valley quinoa and highlands quinoa.

Production and marketing

In 2001, Bolivia reported a production of 70,000 units, of which 15,000 are in the Southern Altiplano of which 60% of production marketing and exported. For the same period Peru reported 60,000 farmers and producers and Ecuador 2500.

Quinoa cultivation is expanding, in 2002 80,000 ha of quinoa in the world was reported, mostly grown in the Andean region. The main producers in the world are Bolivia, Peru and the United States with 46%, 42% and 6% of world production respectively. In recent years (2009) production in the Andean region was about 70,000 t of which 40,000 t were produced by Peru, 28,000 t in Bolivia and 746 t in Ecuador. Without doubt the biggest quinoa producing countries in the Andean region and the world are Peru and Bolivia; until 2008 the production of both countries accounted for 92% of quinoa produced in the world. Behind them are: United States, Ecuador, Argentina and Canada with about 10% of global production volumes.

The cultivation of quinoa has transcended continental boundaries; it is cultivated in England, Sweden, Denmark, Holland and Italy. In the United States it is produced in Colorado and Nevada and in Canada in the prairies of Ontario. In Kenya it showed high seed yields (4 t / ha). In the Himalayas and the plains of North India, the crop can develop successfully with good performance. Tropical savanna areas in Brazil have experimented with the cultivation of quinoa since 1987 and have the potential to obtain higher yields than those of the Andean area.

Bolivia is the largest exporter of quinoa in the world followed by Peru and Ecuador. For the year 2009 Bolivia reported a production volume of 28,000 MT (FAO) and 29,000 MT (INE) of which half is exported (51%). By 2009 the major importers of Bolivian quinoa grain were: United States (45% of Bolivian exports), France (16%), Netherlands (13%), Germany, Canada, Israel, Brazil and the United Kingdom.

Nutritional and functional value

The unique benefits of the cultivation of quinoa are due to its high nutritional value. The protein content of quinoa ranges between 13.81 and 21.9% depending on the variety. Due to the high content of essential amino acids in its protein, quinoa is considered as the sole food of the plant kingdom that provides all the essential amino acids, which are extremely close to human nutrition standards

established by FAO. The balance of essential amino acids of the protein in quinoa is superior to wheat, barley and soybeans, comparing well with the protein in milk.

For some populations of the world, having high quality protein in their diets is a concern, especially those who rarely eat animal protein and should get protein from cereals, legumes and other grains. Although the energy intake of these foods is adequate, inadequate concentrations of essential amino acids (EAA) can increase the prevalence of malnutrition.

In general, if a comparison is made between the nutrient composition of quinoa with wheat, rice and maize, traditionally referred to in literature as the golden grains, it can be ascertained that the mean values reported for quinoa are higher than the three cereals in protein, fat and ash.

The exceptionally high levels of amino acids that quinoa has gives it very interesting therapeutic properties. This is because the bioavailability of lysine in quinoa, the most abundant essential amino acid in its seeds, is very high, while in wheat, rice, oats, millet and sesame it is significantly lower. This amino acid enhances the immune function by aiding in the formation of antibodies, promotes gastric function, assists in cell repair, is involved in the metabolism of fatty acids, helps calcium absorption and transport, and even seems to slow or prevent - along with vitamin C - cancer metastasis, to name just a few of its many therapeutic properties.

Conservation of genetic diversity of quinoa in the Andean countries

The Andean region is considered one of the eight centres of origin and crop diversity. This is where there is greater genetic diversity of both wild and cultivated quinoa. It can still be found in natural conditions and in the fields of Andean farmers.

In order to protect the vast phenotypic and genotypic variability of quinoa that there is in the Andean region, since the mid-60s several gene banks have been implemented in the region. Universities and organizations related to agriculture development are responsible for maintaining them.

The number of accessions preserved in the region exceeds 3 000. Bolivia, Peru, Ecuador, Chile and Argentina have the greater variability of quinoa preserved in gene banks.

Annex II

Draft Resolution... /2011

on

The International Year of Quinoa

Submitted by the Plurinational State of Bolivia

THE CONFERENCE,

Noting that quinoa is a natural food high in nutritional value;

Recognizing that Andean indigenous peoples, through their traditional knowledge and practices of living well in harmony with mother earth and nature, have maintained, controlled, protected and preserved quinoa in its natural state, including its many varieties and landraces, as food for present and future generations;

Affirming the need to focus world attention on the role that quinoa biodiversity plays, owing to the nutritional value of quinoa, in providing food security and nutrition, the eradication of poverty in support of the achievement of the internationally agreed development goals, including the Millennium Development Goals, and the outcome document of the High-Level Plenary Meeting on the Millennium Development Goals;

Recalling the Rome Declaration on World Food Security and the World Food Summit Plan of Action (13-17 November 1996), the Declaration of the World Food Summit: five years later (10-13 June 2002), and the Declaration of the World Summit on Food Security (16-18 November 2009),

Affirming the need to heighten public awareness of the nutritional, economic, environmental, and cultural properties of quinoa:

1. *Requests* the Director-General to transmit this Resolution to the Secretary-General of the United Nations with a view to having the United Nations declare the Year 2013 as the International Year of Quinoa;
2. *Further requests* the Director-General to inform future sessions of the Conference and the Secretary-General of the United Nations of progress in making arrangements, including in securing funding for the International Year of Quinoa and, subsequently, of the results of the Year once concluded.

(Adopted on... 2011)