



# QUINOA - EVOLUTION AND FUTURE PERSPECTIVES

## Authors (enter them one by one)

Alandia G. Bazile D. Condori B. Odone A. Rodriguez J.P.

## Topics

- Agronomie et Systèmes de cultureAgronomy and Cropping systemsSistemas de Cultivos
- Marchés et FilièresMarkets and Food Chains ValuesMercados y Alimentos
- Politiques publiquesPublic PoliciesPolíticas públicas

## Year

2021

## Region / Study sites

- South America
- Central America
- North Africa
- Europe
- Asia
- Middle East
- Africa (other countries)

## Citation

Alandia G., Odone A., Rodriguez J.P., Bazile D., Condori B. 2021. Quinoa - Evolution and future perspectives. In : Schmöckel Sandra (ed.). The quinoa genome. Cham : Springer, p. 179-195. (Compendium of Plant Genomes).

## Abstract

Quinoa (*Chenopodium quinoa*, Willd.) is a high-quality protein grain originating in the Andean region. Once a staple of the Incas, from being unknown in the rest of the world, this grain has recently become a global commodity. This is largely due to its nutritional qualities and adaptation to a wide range of environments. While the majority of quinoa is produced in South America, especially in Peru, Bolivia and Ecuador, production is increasingly spreading across the globe. The production in the area of origin of this grain is becoming increasingly intensive and replacing traditional smallholder production. The International Year of Quinoa catalysed the growth of quinoa in 2013 and led to an increased demand, production and research of quinoa worldwide. Nutrition qualities that made quinoa popular are the high-quality protein, a range of

functionalities related to the nutrients contained in this grain, besides being a gluten free food. Quinoa is well adapted to different latitudes and production under marginal conditions such as drought or salinity. These qualities are used by breeders to develop high yielding cultivars for their regions. New food products containing quinoa are in continuous development. Additionally, this high-quality protein grain with low glycemic index is promoted as a healthy food for celiac and diabetic patients and in the recent vegan, vegetarian or flexitarian diets. Future perspectives for quinoa point to the expected increase of its production around the world. Environmentally, this can bring positive benefits. It represents a nutritious crop for areas affected by climate change. Quinoa also constitutes an alternative to meat that reduces greenhouse gas emissions, furthermore, using this grain increases the use of biodiversity. There are a number of challenges to be addressed, in particular with regards to research into abiotic and biotic stresses, development of new cultivars, saponin reduction and ensuring recognition and fair sharing of genetic materials.

**Link to website**

[https://doi.org/10.1007/978-3-030-65237-1\\_11](https://doi.org/10.1007/978-3-030-65237-1_11)

**Fichier : [alandia-et-al\\_2021\\_springer-book-chapter\\_quinoa-evolution-and-future-perspectives\\_printed.pdf](#)**

Télécharger

**Email corresponding author**

[gar@plen.ku.dk](mailto:gar@plen.ku.dk)

# PRESERVING LOCAL KNOWLEDGE ON CHENOPODIUM QUINOA WILLD. IN THE ANDES IN THE CONTEXT OF MARKET GLOBALIZATION

## Authors (enter them one by one)

Bazile D.

## Topics

- Semences et Ressources génétiquesSeeds and Genetic ResourcesSemillas y recursos genéticos

## Year

2021

## Region / Study sites

- South America

## Citation

Bazile D. 2021. Preserving local knowledge on *Chenopodium Quinoa* Willd. in the Andes in the context of market globalization. *Archaeology and Anthropology*, 4 (1) : p. 573-574.

## Link to website

<https://doi.org/10.31031/AAOA.2021.04.000597>

## Email corresponding author

didier.bazile@cirad.fr

# LE QUINOA AU TEMPS DE LA COVID-19 : VERS DE NOUVELLES COORDINATIONS ENTRE LES PRODUCTEURS DES DIFFÉRENTS PAYS ANDINS

## Authors (enter them one by one)

Andreotti F. Bazile D. Biaggi M.C. Canahua-Murillo A. Chevarria-Lazo M. Chura E.  
Garland G. González J.A. Mujica-Sánchez Á. Tapia-Nuñez M.E.

## Topics

- Marchés et Filières Markets and Food Chains Values Mercados y Alimentos

## Year

2021

## Region / Study sites

- South America

## Citation

Bazile D., Andreotti F., Biaggi M.C., Canahua-Murillo A., Chevarria-Lazo M., Chura E., Garland G., González J.A., Mujica-Sánchez Á., Tapia-Nuñez M.E. 2021. Le Quinoa au temps de la Covid-19 : vers de nouvelles coordinations entre les producteurs des différents pays andins. Cahiers Agricultures, 30 : 7 p.

## Link to website

<https://doi.org/10.1051/cagri/2021016>

## Email corresponding author

didier.bazile@cirad.fr

# GEOGRAPHICAL DISTRIBUTION OF QUINOA CROP WILD RELATIVES IN THE PERUVIAN ANDES: A PARTICIPATORY MAPPING INITIATIVE

## Authors (enter them one by one)

Bazile D.

Chura E.

Drucker A.G.

Fagandini Ruiz F.

Tapia M.

## Topics

- Semences et Ressources génétiquesSeeds and Genetic ResourcesSemillas y recursos genéticos

## Year

2021

## Region / Study sites

- South America

## Citation

Fagandini Ruiz F., Bazile D., Drucker A.G., Tapia M., Chura E. 2021. Geographical distribution of quinoa crop wild relatives in the Peruvian Andes: A participatory mapping initiative. *Environment, Development and Sustainability*, 23 (6) : p. 6337-6358.

## Abstract

The Peruvian Andes are among the world's most important centers of origin for genetic diversity of crops and plants. Quinoa (*Chenopodium quinoa* Willd.) was domesticated in the Bolivian and Peruvian Andean region around Lake Titicaca. In situ conservation systems for quinoa germplasm and its wild relatives can still be found in the traditional systems of Peruvian farming communities. Quinoa crop wild relatives (CWRs), like the majority of CWRs of other agricultural species, are being affected by the considerable changes in the natural landscapes of the Andes. This article analyzes the presence and distribution of seven quinoa CWRs at the agroecosystem level and considers the social and environmental Andean contexts in which they are found. A qualitative research method based on participatory mapping in six local communities of the Puno region in Peru was applied to establish the presence and distribution of the species. We present the results that were confirmed with local actors on participatory GIS maps. Based on our analyses, we conclude that conservation programs should consider both

permanent native meadows and cultivated land with their fallow cycles and plot borders. The diversity of the presence of quinoa CWRs is one result of the coexistence of these two land uses.

**Link to website**

<https://doi.org/10.1007/s10668-020-00875-y>

**Fichier : 596226-3-.pdf**

Télécharger

**Email corresponding author**

didier.bazile@cirad.fr