

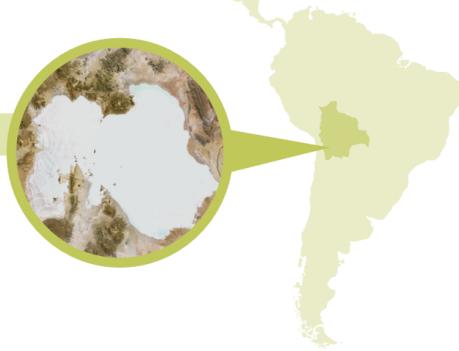
THE IMPACT OF THE QUINOA BOOM ON BOLIVIAN FAMILY FARMERS

NEW FINDINGS BASED ON SURVEY RESULTS FROM 100 HOUSEHOLDS LOCATED IN SOUTHERN BOLIVIA¹

Results of a study by Enrico Avitabile
PhD candidate in Environmental and Development Economics
at RomaTre University*

Salar (salt flats) de Uyuni

Home of the highest Quinoa Real production in the world



BENEFITS

81%

of farmers interviewed
between December 2012 and
March 2013 say quinoa is
their primary source of income



Almost all farmers define
the current price level
as acceptable²



Guarantees improved
incomes and access to credit



Access to additional labour
and machinery



Increased productivity

Improvement in basic assets

Better living conditions



Possibility of better education

- Number of people in training: 70% of people answered 'student' as first occupation within the 18-25 age class
- Investment in higher education: percentage of people with more than 10 years of study quadrupled in the 18-25 age class compared to the over 40 age class

Reversal of the large migration flows
(especially of young people)
that afflicted this area just a few years ago

CAN PRESSURE OF FOREIGN DEMAND PUT FOOD SECURITY AT RISK IN BOLIVIA?



1. QUINOA CONSUMPTION IN RURAL AREAS³

In the past:
Higher quinoa consumption - families used
to eat quinoa "3 times a day, 7 days a week"

2012-2013:
Lower quinoa consumption (still adequately
consumed) but local diet is more varied

HOW?



Increased demand
for quinoa



Money
availability



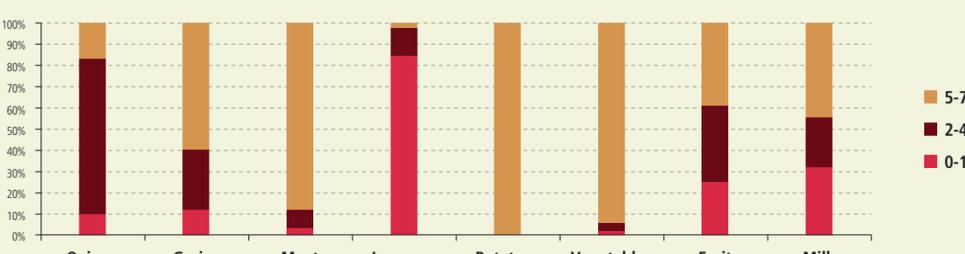
Increase in
informal local trade

Easier access to different types of previously inaccessible food
(both geographically and financially) like fruit and vegetables

MORE VARIED LOCAL DIET

Farmers say their food conditions have
"improved, thanks to quinoa"

● Frequency of consumption by food type among farmers (days/week) in 2012



2. QUINOA CONSUMPTION IN URBAN AREAS

Domestic consumption is increasing⁴ - per capita consumption was:

► 0.35 kg/year in 2008

► 1.11 kg/year in 2012

CHALLENGES

1. LAND DEGRADATION

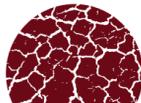
More than **50%** of farmers interviewed define the soil poorer compared to 3 years ago



Increased quinoa production



Expansion of areas for
quinoa cultivation



Increased soil erosion
(particularly marked in the
Southern Altiplano)



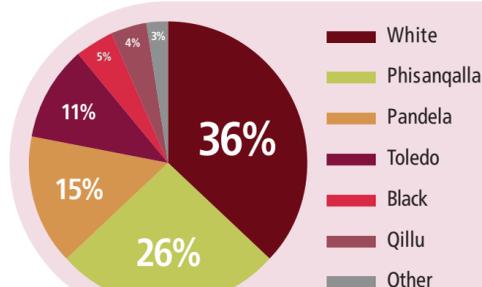
Adverse impact on other farming
activities: the ratio of "number of
lamas to cultivated hectares" has
decreased in recent years

2. REDUCTION OF CULTIVATED VARIETIES

● Percentage of quinoa production (in qq) by variety

Just three varieties cover more than 75% of the entire production,
because they are the most demanded by the export sector.

This reduction in cultivated varieties is associated with a
reduction in biodiversity. However, people in the villages can
appreciate the differences among the varieties (some varieties
are preferred for specific uses or ways of cooking, and a few of
them are still used in traditional medicine).



HOW CAN THE QUINOA BOOM CONTINUE IN A SUSTAINABLE WAY (FROM AN ENVIRONMENTAL, SOCIAL, ECONOMIC AND CULTURAL POINT OF VIEW)?



Increased efforts in developing
the domestic market through
public policies
(e.g. public meal programmes)



Guarantee a greater access
to this nutritious food
for all Bolivians



Quinoa is exported solely
as pearly grain,
with little added value



Increased effort in developing
agroindustry

Greater integration and collaboration between different
actors involved in the quinoa chain



Private export firms are more active in developing new products
and technologies, while producer associations are more
linked to life in the communities (better equipped to
manage the environmental issues).



Conciliation of market demand and conservation of genetic diversity:
In Bolivia, much research is being undertaken to improve the use of
quinoa in agroindustry by using different properties associated with
diverse varieties more efficiently.



Lama breeding (the manure is required to fertilize the ground).



Promising association between quinoa production and ecotourism
(the Salar region is one of the most visited attractions in Bolivia).

Quinoa is a "strategic product for food security and a great export opportunity"

The Bolivian Government, Ley De La Revolución Productiva Comunitaria Agropecuaria

¹This investigation is based on a number of key livelihood, environment and development indicators i.e. financial, human development, food security, environment and biodiversity conservation, and cultural identity indicators.

²There is more concern about price volatility, which is very high, especially for some varieties such as phisanqalla (red quinoa).

³At absolute and percent level.

⁴We did not collect data on quinoa consumption in the urban context, this official data comes from the Instituto Nacional de Estadística (National Institute of Statistics).

*Enrico Avitabile is PhD candidate in Environmental and Development Economics at RomaTre University (Italy); the research in Bolivia is part of a Bioversity International research programme funded by IFAD with support from RomaTre University, the European Union, the CGIAR Research Programme on Policies, Institutions and Markets, and Fundación PROINPA.

Infographic prepared by



with data provided by
enrico.avitabile@uniroma3.it

