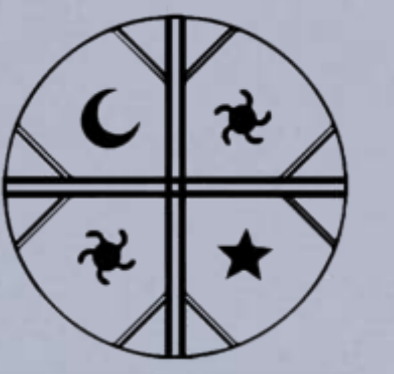# The Quinoa We Grow

By Daniela Hernández Cuadra

Introduction

This work illustrates how Quinoa (*Chenopodium quinoa Willd*) is an important crop worldwide because of its potential to make a significant impact on the global food shortage crisis and in fighting poverty. A profile review of the plant is provided, highlighting what makes it notably adaptable to a wide range of conditions and highly stress-resistant. Two approaches were taken: biological to highlight its advantages and sociocultural to mark its significance.

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Why Quinoa?

Exceptionally Adaptable	Suitability to Global Issues	Advantageous Byproducts
Requires Minimal Protection	Pharmacological Applications	Remarkable Nutritional Value
Potentially Cultivable Anywhere	Salinity & Drought Resistance	Biological Pest & Disease Control for Other Plants

Not Just Any Pseudocereal

- Mostly self-pollinated.
- Natural defenses optimize water use.
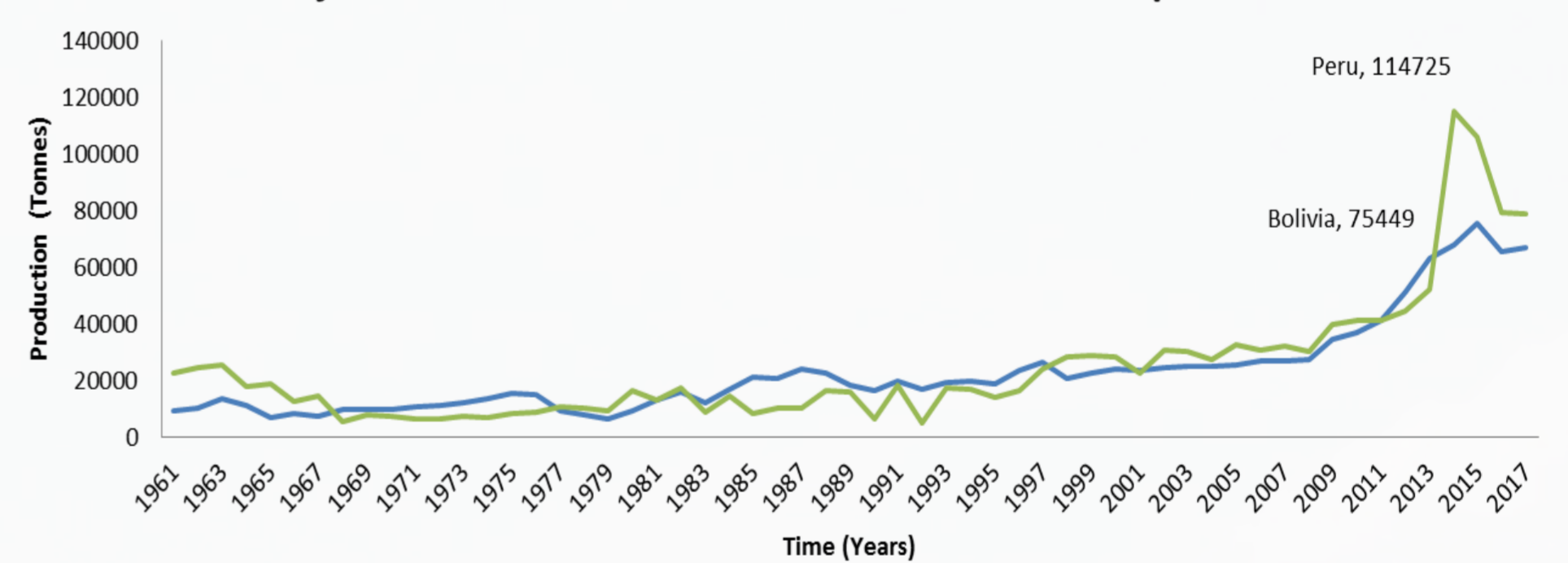- Highly efficient survival mechanisms.

What Can We Expect?

- A biodiversity bottleneck event, due to farmer migration from rural zones to urban centers, exposing Quinoa to further genetic erosion.
- Due to a greater popularity and a better reputation it may become too expensive for those who need it the most

Up, Down, and Back

- Sacred respect and dietary staple to various Indigenous Cultures.
- Over 5,000 yrs. adapting to our convenience and preference.
- Adaptation to different forms of stress over the last 3,000 years.

- A powerful influence in Quinoa's diversity is considered a political bottleneck that has lasted over 400 years.
- The Spanish discouraged and destroyed cultivated areas, reducing Quinoa's biodiversity.
- The species survived only thanks to native small-scale growers in Peru, Bolivia, and Chile.

- Every year more countries add Quinoa to their production.
- The UN organization is working to spread Quinoa worldwide.
- 2013 was declared "International Year of Quinoa".

Major Pruducers' Tonnes of Quinoa Production per Year

Peru, 114725

Bolivia, 75449

Conclusions

- Importance of Indigenous cultures to aid current world crises.
- Quinoa has the potential to make a significant impact on the global food shortage crisis, and capacity to help us fight poverty, starvation, hunger, and malnutrition.
- As climate change rapidly degrades farming conditions worldwide, a crop that resists these conditions is becoming vital.

SC/BIOL 2010