Analyzing the Correlation between Bolivian Quinoa Price and European Import Price

Since little information has been collected about the price development of both the local quinoa price in Bolivia and trade prices (export and import), there is much room for speculation about the price margins at various levels of the value chain. At Mercadero, we started collecting these prices in 2013. Our sources are Pedro Claver in Bolivia who informs us about the development on the local market. Next to that, we use data from Cabolqui, the Bolivian Chamber of Quinoa Exporters as well as Eurostat, the European Trade Bureau. The general trend of all prices is to increase and by comparing the local with the trade price, one sees that the margin between farmer and exporter is not as big as speculators expect. Although the document provides more transparency in the composition of prices, there is a need of making a more thorough analysis.

1. Introduction

Since 2012/2013, the voices criticizing the quinoa boom in Bolivia became very loud. Trade statistics show a continuous increase in volume and price, both in trade (import/export) and retail. The statistics are well substantiated but at the same time, there are wild speculations about where the price increase is happening. Farmers are suspected to stock-pile their quinoa until prices are increasing and other stakeholders are accused of speculating on the price. Very few sources publish current and complete information about price development in the producing countries, export and import prices. Since September 2013, Mercadero is collecting weekly the Bolivian quinoa price which is determined on the local market in Challapata as well as Bolivian export and European import price as it is given by the Chamber of Bolivian Quinoa Exporters (Cabolqui) and the European Customs (Eurostat), respectively. In the following document, we are presenting the Challapata, the export and the import price and will give a preliminary analysis of those. For more detailed analysis of the price records, please contact Mercadero.

2. The Challapata Price

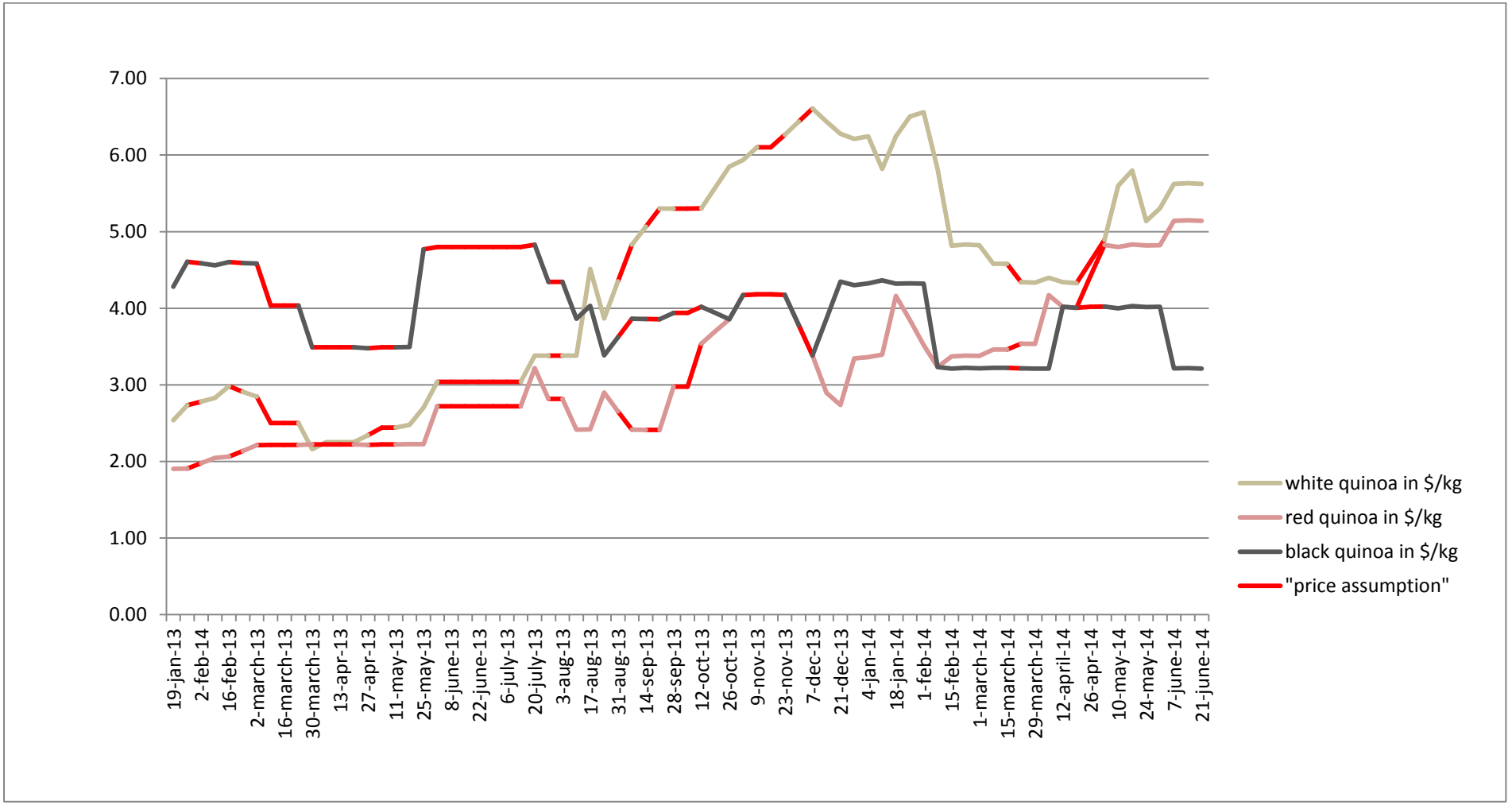
2.1 General Information

The Challapata price is decided weekly on the Challapata market in the center of the Bolivian Altiplano; the traditional area of quinoa cultivation. The Challapata price is so important because associations and quinoa processing companies use it as a benchmark. Buyers need to respond to the dynamics of the Challapata price; otherwise farmers would turn their back to the (contract) buyers if they offered a lower price than the traders in Challapata. Associations like ANAPQUI hence have the policy of adding about 100 Bolivianos ($14.16) to the Challapata price of one quintal (46kg).

2.2 Price Development

With the start of recording the Challapata prices in January 2013, one kg of white quinoa cost $2.54, red one $1.90 and black one $4.28 on the Challapata market. During the year, the picture of black quinoa being the most expensive turned around with white quinoa being more expensive than red and black quinoa. Being the most demanded variety, only the price development of white quinoa will further be discussed in this report. The peak of the white quinoa price was reached on 8 December 2013, when farmers got $6.60 for one kg of their produce. The price remained almost at that height until 2 February when quinoa cost $6.56. In the following weeks, the price dropped weekly until $4.33 on 19 April. After 19 April, the price was climbing up again and reached $5.62 on 7 June. Beginning in February, the harvesting season in the Bolivian Altiplano starts, which can explain the price drop in the period from February to April. In the quinoa season 2012/2013, a similar behavior of the price could be observed in the same period: in February 2013, white quinoa rose to $2.85 and dropped to $2.21 with the beginning of the new harvest in March.

2.2.a Price Record of the Challapata Price in Bolivia, 2013 until June 2014

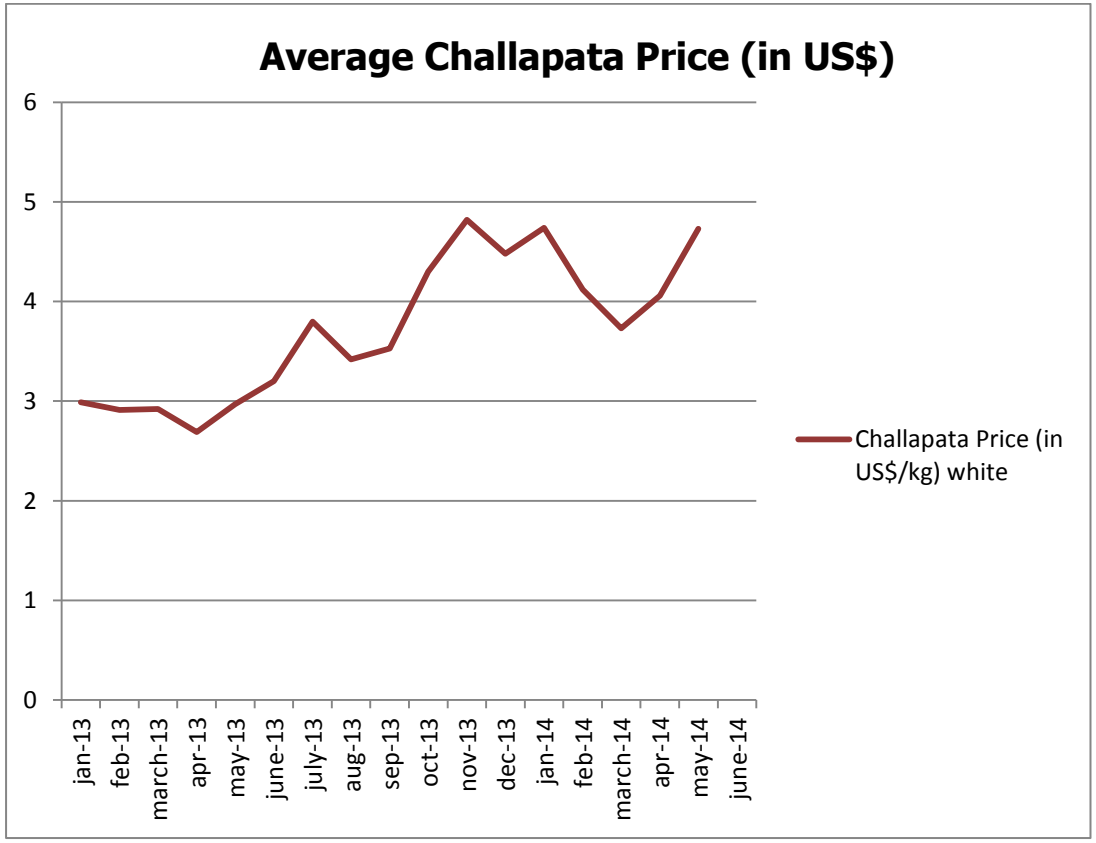


Graph1: Challapata Prices, in US$ per kg, 2013 to June 2014; Source: P. Claver, elaborated by Mercadero

2.2.b Monthly Average of Challapata Price

In order to compare the Challapata price with the export and import price, Mercadero derived a monthly average of the four weekly Challapata prices. The average has been derived only for white quinoa since international trade is determined to 80% by white quinoa. Since prices between the three quinoas differ significantly, the average price would need to be done in proportion to the share of red, black and white quinoa in international trade.

Challapata Price (in US$/kg) white	
jan-13	2.99
feb-13	2.91
march-13	2.92
apr-13	2.69
may-13	2.97
june-13	3.2
july-13	3.8
aug-13	3.42
sep-13	3.53
oct-13	4.3
nov-13	4.82
dec-13	4.48
jan-14	4.74
feb-14	4.12
march-14	3.73
apr-14	4.06
may-14	4.73
june-14	



Graph 2: Monthly Average of Challapata Price, 2013 until June 2014; Source: Pedro Claver and Mercadero, June 2014

When mentioning white quinoa, both conventional and organic white quinoa are included. Please note that the price of June 2013 is missing and a price of $3,200 is assumed. The average of the Challapata price in Bolivianos/quintal has been divided by 46 in order to get kg and divided with the according monthly rate of Oanda Currency Converter. The price is hence presented in US$/kg. The information of the above data has been collected by Pedro Claver and recorded by Mercadero. More data concerning the Challapata price include a Challapata price record since 1988 and the export data since 1990.

2.3 Limitations of Challapata Record

As already mentioned before, the difficulty of deriving the Challapata Monthly Average Price is that an average price should be calculated per quinoa color since prices are differing so much. Nevertheless, when deriving the trade price by dividing the value of traded quinoa with the quantity of traded quinoa, the proportions of red, white and black quinoa traded are included. Since exact quantities traded in Challapata are not known, it is hence not possible to make an overall price. However, we know that about 80% of the traded quinoa are the white one, so we focus on the price for white quinoa only in the following.

Another limitation is that the records are not complete in a way that a weekly development could be observed. There is definitely enough information to observe the general trends but in June and July 2013, there is a gap of records. In order to compose the table and the graph regardless, the gaps have been filled with the average of the price before and after the gap. The average prices are indicated with a red stripe.

3. Trade Price

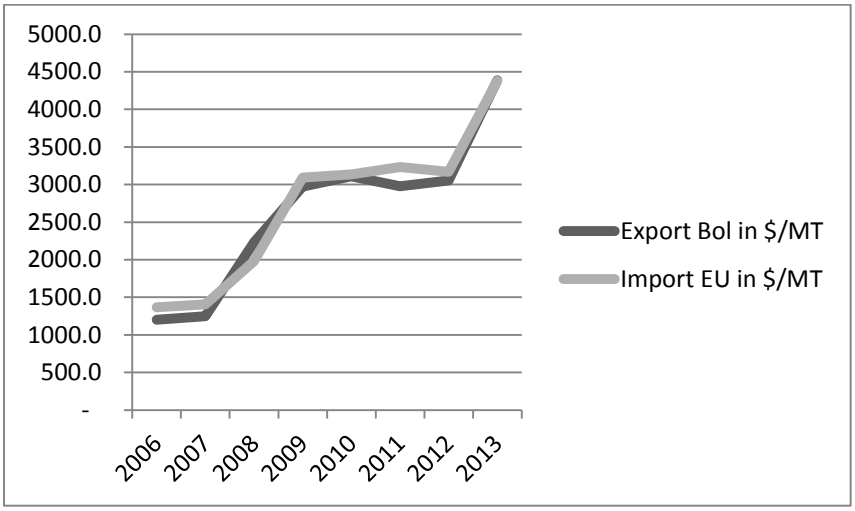
3.1 General Information

As export volumes increased during the quinoa boom, prices for producers as well as for international traders rose as well. The Statistical Newsletter of Cabolqui (published on the 17 February in La Paz), which has been elaborated with data from the Bolivian customs, illustrates the export prices.

Another source of information to compose the trade price is Eurostat. The data sourced from the European Statistics has been further elaborated by Mercadero. By dividing the total value of quinoa imports (per month) with the quantity imported, one can determine the monthly import price. The HS code 1008.50.0000 includes all types of quinoas (black, red and white) as well as organic and conventional. The comparisons are done for the year 2013 mainly since the Eurostat data is not updated yet.

Since Cabolqui publishes only the yearly and not the monthly quinoa export price, the Eurostat monthly quinoa import price is used for further comparisons with the Challapata data. The figure below shows that the export price (in Bolivia) and the import price (in Europe) are almost the same.

3.1.a Import and Export Prices, 2006-2013



Graph 3: Comparison of Export Price and European Import Price, 2006-2013. Elaborated by Mercadero

3.2 Price Development

Comparing the official Bolivian export price (collected by Cabolqui) with the European import price, one notes that the movement of the prices is very adjusted to each other. Price differences are small and do not exceed 8.8% (in 2011). The general trend is to move upwards though. The percentage increase from 2006 to 2013 has been 245% for the export price and 220% for the import price.

In 2006, a ton of quinoa was sold for $1,200 whereas 6 years later, in 2012, prices had gone up to $3,054/MT. (For a more complete data set, please contact Mercadero). The average export price in 2013 has been as high as $4,145/MT and has temporarily (8.12.2013) reached $6.609/MT at the farm gate. According to personal information from Cabolqui members, Bolivian quinoa processing and exporting companies pay 85% of their sales price for raw materials. That translates into an export price of about $9,000. The price is confirmed by Dutch organic quinoa trader Jorn van den Dop who experienced the expensive quinoa as an importer in the end of 2013.

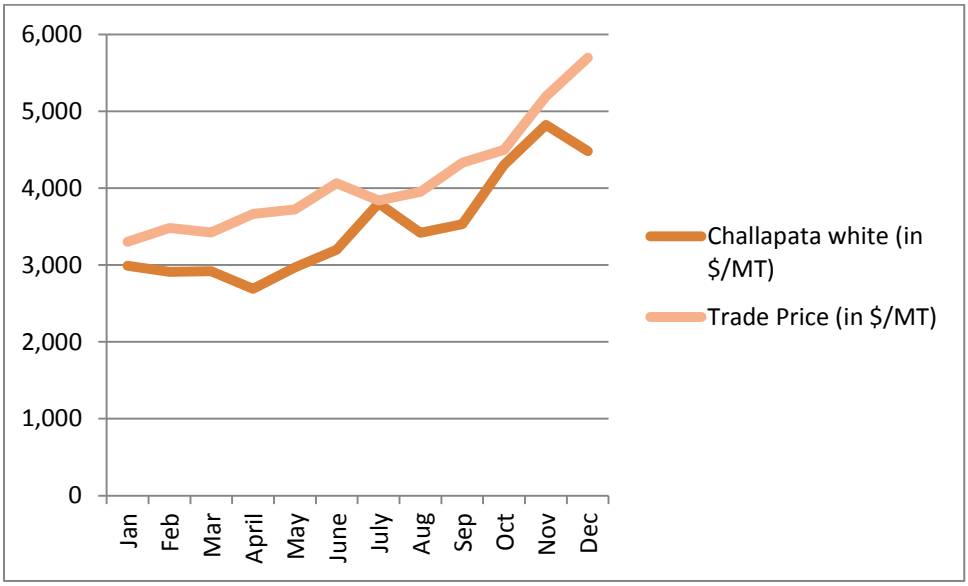
3.3 Limitations

The limitation in this chapter is that the only comparison possible between quinoa export and quinoa import price is a yearly one. Although a monthly import price is possible to derive a comparison cannot be done since the statistical newsletter of Cabolqui publishes only the yearly export price. Fortunately, the import and export prices move almost simultaneously so that the monthly import price of Eurostat will be used as "trade price" in the following.

4. Comparison of Challapata and Trade Prices

In the graph below, we can observe that the trade price is tendentially higher than the Challapata price. The difference lies between 1.03% in July and 36% in April. Generally, the Challapata price fluctuates much more than the trade price. The tendency of both prices to move upwards, can be explained with two reasons. First of all, the general international demand for quinoa exceeds its supply and raises prices. Another explanation is the seasonality of the quinoa production. Towards August/September, the harvesting season ends and demand exceeds supply. From March onwards, the harvesting season begins and the local price drops. The trade price is moving more continuously upwards and seasonality seems to be damped. The price records need to be observed throughout a

longer period of time in order to guarantee that the price drop in Challapata is certainly related to seasonality and with which delay a price drop or a price rise shows in the trade price.



Graph 4: Challapata vs Trade Price, Comparison 2013

2013	Challapata white (in $/MT)	Trade Price (in $/MT)
Jan	2,990	3,303
Feb	2,910	3,480
Mar	2,920	3,423
April	2,690	3,663
May	2,970	3,724
June	3,200	4,063
July	3,800	3,839
Aug	3,420	3,953
Sep	3,530	4,331
Oct	4,300	4,498
Nov	4,820	5,194
Dec	4,480	5,697

5. Conclusion

Summarizing the information of the graphs above, it can be concluded that a general trend of all prices, the local Challapata price, the export and import price are rising. More importantly, it is to be noted, that the trade price rises quite simultaneously to the Challapata price. The margin that lies between the two prices is relatively small since it does not exceed 36%. The trade price is naturally adapting to the price in Challapata which contradicts with the rumor of export companies, harshly speculating on the prices. A bigger margin must be added in the importing countries, resulting in a retail price of $22. Nevertheless, a longer collection of monthly Challapata, export and import prices, separated by color and organic/conventional will give a more complete picture of the correlations of price development in the Bolivian/international quinoa market.