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Master's Thesis

*Bolivia's local organic market and how it might
be affected by the new national organic
legislation 3525/06*



handed in by Arnd Zschocke

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Acknowledgements

This document is the thesis to obtain my MSc. degree in [International Organic Agriculture at the University of Kassel](#) / Germany. Because I hope this text will be useful to other people than only me to achieve my degree I optimized it for the electronic use as a pdf-file. In the electronic version the reader has the possibility to follow internal and external links directly. I encourage people to share and copy this document if it seems useful to them. If there are any questions concerning contact data or raw data from the surveys please contact me at arzschocke (at) web . de

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I hope the process of change that is taking place in Bolivia will contribute to improve the living conditions of the many Bolivians who have lived through centuries of exploitation and repression. I have faith that the Bolivian people will not need violence to resolve their internal conflicts and will take the right path of national self determination and independence which will also lead to food sovereignty.

Table of Contents

| | |
|--|-----|
| List of tables..... | iii |
| List of figures..... | iii |
| List of abbreviations..... | v |
| Abstract..... | vi |
| 1 Introduction..... | 1 |
| 1.1 Relevance of the topic..... | 2 |
| 1.2 Research question..... | 2 |
| 1.3 Organization of the thesis..... | 3 |
| 2 State of research..... | 4 |
| 2.1 Purpose of laws and certification for organic products..... | 4 |
| 2.2 Evolution of organic agriculture, certification and legislation in Germany / Europe..... | 6 |
| 2.3 Experiences in other Latin American countries..... | 9 |
| 2.3.1 Chile..... | 9 |
| 2.3.2 Argentina..... | 11 |
| 2.3.3 Paraguay..... | 12 |
| 2.3.4 Brazil..... | 13 |
| 2.3.5 Peru..... | 14 |
| 2.3.6 Ecuador..... | 15 |
| 2.3.7 Costa Rica..... | 16 |
| 2.3.8 Mexico..... | 17 |
| 3 Methodology and material..... | 19 |
| 3.1 Analysis of law 3525/06..... | 19 |
| 3.2 Analysis of the market..... | 20 |
| 4 Bolivia..... | 24 |
| 4.1 Basic country facts..... | 24 |
| 4.2 Socio-economic framework..... | 25 |
| 4.3 The agricultural sector..... | 26 |
| 4.4 Government control over the local market..... | 27 |
| 4.5 The production and export of certified organic products..... | 28 |
| 5 Law 3525/06..... | 31 |
| 5.1 Development of ecological legislation in Bolivia..... | 32 |
| 5.2 Contents of law 3525/06..... | 34 |
| 5.3 Implications for the local market (alternative certification)..... | 39 |
| 5.4 Implementation..... | 40 |
| 5.5 Experts opinions (surveys and interviews)..... | 40 |
| 6 The local market for organic products..... | 42 |
| 6.1 The stakeholders..... | 42 |
| 6.1.1 Producers and Processors..... | 42 |
| 6.1.2 Retailers..... | 44 |
| 6.1.3 Consumers..... | 45 |
| 6.1.4 Certifiers..... | 46 |

| | |
|---|------|
| 6.1.5 General public..... | 47 |
| 6.2 Results of the surveys..... | 48 |
| 6.2.1 Producers..... | 48 |
| 6.2.2 Retailers..... | 51 |
| 6.2.3 Consumers..... | 53 |
| 6.2.4 Experts..... | 57 |
| 6.3 Results of studies previously conducted in Bolivia..... | 61 |
| 6.3.1 2006 AOPEB / ACSHA study in La Paz (FAO project TCP/RLA/3006)..... | 61 |
| 6.3.2 2004 Agrecol Andes study in Cochabamba (ECO Feria project)..... | 62 |
| 6.3.3 2002 FAO study ASOPEC Santa Cruz..... | 63 |
| 6.3.4 1997 AOPEB study in La Paz..... | 65 |
| 7 Discussion and interpretation of the results..... | 66 |
| 7.1 Producers..... | 66 |
| 7.2 Retailers..... | 68 |
| 7.3 Consumers..... | 69 |
| 7.4 SWOT Analysis..... | 70 |
| 8 Conclusion and Recommendations..... | 72 |
| References..... | 75 |
| Annexes..... | I |
| Political map of Bolivia..... | I |
| The surveys..... | II |
| Ecological producers and processors:..... | II |
| Personnel or owners of points of sale for ecological products..... | III |
| Consumers of ecological products..... | IV |
| Experts on the ecological agriculture and the local market..... | V |
| Experts on the new legislation..... | VI |
| Questionnaire for certifying bodies to estimate the national certified production for export..... | VII |
| A selection of organic labels found on products in Bolivia..... | VIII |
| Ecological retailers and signs..... | IX |

List of tables

| | |
|--|----|
| Table 1: SENASAGs problems implementing the national control system according to experts opinions..... | 41 |
| Table 2: Experts answers about what should be changed in the legislation..... | 41 |
| Table 3: Experts opinions on growth obstacles for the national ecological market..... | 59 |

List of figures

| | |
|--|----|
| Figure 1: Private labels of selected farmers associations in Europe..... | 8 |
| Figure 2: Organic seal of Chile..... | 10 |
| Figure 3: Organic seal of Costa Rica..... | 17 |
| Figure 4: Age group distribution of surveyed consumers..... | 22 |
| Figure 5: The logic of a SWOT analysis..... | 23 |
| Figure 6: Major ethnic groups..... | 25 |
| Figure 7: Sectoral distribution of GDP and labour force..... | 25 |
| Figure 8: Share of cultivated area by crops..... | 26 |
| Figure 9: Number of certified organic farms 1995 – 2006..... | 29 |
| Figure 10: Organically certified area (ha) 1995 - 2006 without brazil nut wild collection area..... | 30 |
| Figure 11: Volume of certified organic products 1995 - 2005 (metric tons)..... | 30 |
| Figure 12: Composition of the certified organic production in 2005 (volume) | 31 |
| Figure 13: National logo for ecological products..... | 35 |
| Figure 14: Urban household expenditures on food and non-alcoholic beverages..... | 45 |
| Figure 15: Producers definitions of ecological products..... | 48 |
| Figure 16: Sales channels of producers..... | 48 |
| Figure 17: Product categories produced or processed by the respondents..... | 49 |
| Figure 18: Producers guaranty for the ecological status of their products..... | 50 |
| Figure 19: Retailers definitions of ecological products..... | 51 |
| Figure 20: Product categories sold by the retailers..... | 52 |
| Figure 21: Retailers assurance of suppliers quality..... | 52 |
| Figure 22: Retailers ecological quality guarantee to the consumers | 53 |
| Figure 23: Consumers definitions of ecological products..... | 53 |
| Figure 24: Products demanded by the consumers..... | 54 |
| Figure 25: Consumers known points of sale for ecological products..... | 55 |
| Figure 26: Ecological products bought by consumers..... | 55 |
| Figure 27: Consumers actual quality control for ecological products..... | 56 |
| Figure 28: Consumers preferred quality control for ecological products..... | 56 |
| Figure 29: Price premium the consumers are willing to pay for guaranteed ecological products..... | 57 |
| Figure 30: Means of experts estimates about ecological consumers willingness to pay a price premium..... | 58 |
| Figure 31: Means of experts estimates about ecological consumers age structure..... | 58 |
| Figure 32: Means of experts estimates about ecological consumers guaranty preferences..... | 59 |
| Figure 33: Means of experts estimates about ecological producers reasons to convert to ecological agriculture..... | 60 |

List of abbreviations

| | |
|----------------------|---|
| AOPEB | Asociación de Organización de Productores Ecológicos de Bolivia (organic farmers association of Bolivia) |
| ACSHA | Asociación de Carpas Solares de Hortalizas de Achocalla |
| AGRUCO | Agroecología Universidad Cochabamba |
| ANAPQUI | Asociación Nacional de Productores de Quinoa |
| CAINCO | Cámara de Industria, Comercio, Servicios y Turismo de Santa Cruz |
| CCT | Comisión de Coordinación Técnica |
| CEIISA | Centro de Estudios e Investigación en Impactos Socio ambientales |
| CNAPE | Consejo Nacional de Producción Ecológica (National Council for Ecological Production) |
| CSUTCB | Confederación Sindical Única de Trabajadores Campesinos de Bolivia (farmers union) |
| FECAFEB | Federación de Caficultores Exportadores de Bolivia |
| GMO | Genetically Modified Organism |
| HDI | Human Development Index |
| ICS | Internal Control System |
| IFOAM | International Federation of Organic Agriculture Movements |
| MAELA | Movimiento Agroecológico Latinoamericano |
| MDRAYMA | Ministerio de Desarrollo Rural, Agropecuario, y Medio Ambiente |
| MPD | Ministerio de Planificación del Desarrollo |
| MPM | Ministerio de Producción y Microempresa |
| MREC | Ministerio de Relaciones Exteriores y Cultos |
| NCA | National Competent Authority (in Bolivia the SENASAG) |
| NOP | National Organic Program (USA) |
| NTFP | Non-Timber Forest Products |
| PGS | Participatory Guarantee System |
| SENASAG | Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria (Competent Authority) |
| SWOT-Analysis | Strengths, Weaknesses, Opportunities and Threats – Analysis |

Abstract

The booming demand for organic products leads to high growth rates in this sector, especially in exporting countries. This study investigates how organic legislation in Latin American countries, which is intended to support the export sector, can also influence the local market. This is done through a case study for Bolivia, its new law 3525/06 and its national market for organic products. The general situation in Bolivia is described briefly, the new law is analyzed, and an analysis of the national market for organic products is presented. The results are that the new law is very progressive and allows easier access to organic certification for the internal market. Nevertheless, the local organic market is still a very small niche market and completely unregulated, but there is potential for growth if the implementation of the law is accompanied by a broad publicity campaign aimed at the consumers and support and education for farmers.

1 Introduction

The world market for organic products has been growing fast in the last decade, reaching an estimated total value of over 40 billion US dollars in 2007, a figure that more than doubles the value of 2000. Recently there were even shortages in the supply of organic products. The consumers are concentrated in the major northern markets (Europe and the North America comprise 97% of the global organic revenues) but their demand is increasingly met by imports from other regions like Asia, Africa or Latin America. The organic production in these areas has had even higher growth rates than in Europe or the US but is totally dependent on the export markets - over 90% of the organic products in these countries are exported. (Willer, H. et al., 2008, p. 53ff)

The strong market growth in Europe and North America is also the result of the implementation of organic legislation in the European Union 1991 (EEC2092/91) and in the United States 2002 (NOP – National Organic Program). These laws boosted consumer confidence in organic product's quality and enabled the explosion of the market.

The focus of this paper is neither on the northern market nor the southern exports but rather on the southern internal market for organic products. These markets are still very small which makes the organic producers dependent on export markets and crops. This can be a very dangerous and unsustainable situation for the organic producers if demand drops in the northern countries or trade barriers arise. Also this dependency does not adhere to the original concepts of organic farming such as closed cycles, fairness and sustainability. Consequently local markets for organic products in these export oriented countries should be promoted on a national level to reduce dependence on exports, to establish more sustainable production systems and consequently to ensure food security for the population. These would be measures which would fit into the concept of food sovereignty which is a term that describes the people's right to self determination of their food and agricultural systems to achieve food security in a socially just, culturally appropriate, environmentally sound and sustainable way¹.

In the future conventional agricultural practices have to be changed because they are unsustainable. They cause degradation of soil fertility, pollute the environment, and use too many non-renewable external inputs mostly on the basis of fossil fuels. Fossil fuels contribute especially to global climate change and their production has already peaked

¹ The term “food sovereignty” is explained and discussed well in [Windfuhr, M. and Jonsén, J., 2005](#)

which means that they will get ever more expensive. If agriculture depends on them as heavily as today² this dependence will lead to higher food prices and subsequent food insecurity and hunger. To prevent this alternative production systems such as organic agriculture have to be promoted and local markets for organic products should be established.

This thesis sheds a light on the exemplary situation of Bolivia, a poor South American country which is exporting exporting organic products, but has taken first steps towards food sovereignty and the establishment of a local market for organic food through new legislation and policies.

“When we speak of ecological Bolivia we are speaking about sovereignty and human security; to produce ecological products is not for the money but it is about life, we are speaking about the life of humanity” (Bolivian President Evo Morales 2006)³

1.1 Relevance of the topic

To the knowledge of the author a comprehensive summary of the situation of the national market for ecological⁴ products in Bolivia has not been published. In the face of new national law 3525/06 and the overall government development plans, which favor small producers and ecological projects, it seems important to asses the situation of the market and analyze the possible effects of the new legislation.

This document might be useful to all stakeholders who wish to get an overview over the situation, identify key issues and players and hopefully in this way contribute to the growth of the national market for ecological products in Bolivia.

This paper might also be relevant to researchers who want to draw lines between the situation of the national ecological market and legislation in Bolivia and in other Latin American countries

1.2 Research question

The present work is tries to answer the question, if in Bolivia a regulating law for organic agriculture, processing and marketing will be able to promote the growth of the local market for organic products, thus providing consumers with the opportunity to consume

2 A very good paper on the dependence of modern agriculture on fossil fuels is [Church, N., 2005](#).

3 This quote is taken from [Vildoza, L., 2007](#)

4 Throughout the whole text the word ecological will be used as a synonym for organic or biological because it is the most accurate translation of the Spanish term “ecológico”.

healthy and nutritious food while paying a fair price to the producer who produces using environmentally sound practices.

1.3 Organization of the thesis

To answer the aforementioned question it is necessary to look at three main factors namely **the general situation in Bolivia, the new law 3525/06** and **the internal market for ecological products**, and then analyze / predict how these factors might work together also taking into account similar projects and experiences in other countries. The structure used in this work is meant to reflect this logic:

In chapter 2 the reader will get an introduction into why laws and certification for organic products are needed (2.1) and a brief overview on how the organic movement and legislation developed with the example of Germany / Europe (2.2). In chapter 2.3 a brief glimpse is taken at the advance of national legislation and markets for organic products in Bolivia's neighboring countries Chile, Argentina, Paraguay, Brazil, Peru and three others Latin American nations which are Ecuador, Costa Rica and Mexico.

In chapter 3 the methodology and material used in this study are discussed, first for the analysis of the law (3.1) and then for the analysis of the market (3.2).

In chapter 4 the situation in Bolivia is described starting with basic country facts (4.1) and an overview of key socio-economic figures (4.2) followed by a description of the agricultural sector (4.3). After that the instruments of governmental control over the local market for agricultural products (4.4) are described and at the end of this chapter is an overview of the export production of certified organic products (4.5).

In chapter 5 the legislation is analyzed by looking at the evolution of the Bolivian law 3525/06 (5.1) and its contents (5.2), especially analyzing the provisions for the local market (5.3). At the end of this chapter the efforts and steps that were already made to implement the law (5.4) are discussed and the results of the expert interviews on this topic are presented (5.5).

In chapter 6 the local market for organic products in Bolivia is described in its 2007 situation (before implementation of the law) first looking at who the stakeholders are (6.1) and then presenting results of surveys and interviews (6.2) conducted by the author with producers, retailers, consumers and experts about the market situation. At the end of this

chapter the survey results are put into perspective by analyzing similar surveys conducted in Bolivia (6.3).

In chapter 7 the results are further discussed for producers (7.1), retailers (7.2) and consumers (7.3) concluding with a SWOT-Analysis (7.4) for the organic sector in the local Bolivian food market.

In chapter 8 the author draws his conclusions and gives some recommendations on how the national organic market could be strengthened in Bolivia.

2 State of research

2.1 Purpose of laws and certification for organic products

The key concepts as to why we need labels and certificates for organic products are “quality”, “trust” and “information asymmetry”.

Quality: The term “organic” describes a certain extrinsic quality aspect of a product which is connected to its production process. The word signals to the buyer that the product has been produced using certain production methods which give it a higher quality or value in the eye of a buyer who has a preference for these production methods.

Trust: The problem is that such extrinsic quality parameters cannot be verified by the buyer at the moment of purchase or consumption. The buyer has to trust the information he gets from the seller.

Information asymmetry: The seller has more information about the product quality than the buyer.

According to Bodenstein, G. & Spiller, J., 1998, p223ff there are five different levels of information asymmetry:

1. The information about product quality is symmetric when we look at transactions of standardized goods such as electricity (not taking into account “green” power) which are tradable in an anonymous stock market.
2. The next level would be quality aspects that are visible from the outside before consumption like the size of a banana.

3. More asymmetrical is the information about quality aspects that can be assessed by simple sensory means at the moment of consumption, like the taste of a banana.
4. A further step into information asymmetry are quality aspects that can only be measured with specialized equipment like the nutritive value of the banana or its contamination with agrochemicals.
5. The last step into complete information asymmetry are extrinsic quality aspects of a product that cannot be measured in the product itself like process qualities i.e. child labor used in harvesting the banana.

As 2001 Nobel prize winner George Akerlof describes in his famous 1970 paper "*The Market for Lemons: Quality Uncertainty and the Market Mechanism*", markets for products with qualities above category 2 can break down. This happens because there is an incentive for the sellers to sell low quality products yet claiming they are high quality because the buyer cannot verify the quality at the time of purchase and on the other hand the buyers do not trust the sellers and are not willing to pay a premium price for a quality product where they cannot assess the quality beforehand, (Akerlof, G., 1970).

There are several instruments to prevent this type of market failure: Guarantees giving the buyer the right to return the product if the quality does not meet his/her quality expectations work for product qualities of category 3. Also brand image and reputation are often effective in giving buyers the trust to pay price premiums for qualities in category 3. To solidify the buyer's trust for product qualities in category 4 apart from giving a guarantee and having a brand name the seller should present a third party (laboratory) test certificate to be trustworthy. A good example of the market for milk in India in the 1970s demonstrates this case. Milk was routinely watered down by the sellers and because the buyers could not assess the quality they would not pay more than the lowest price. That drove unadulterated quality milk out of the market. This problem was fixed by a campaign of the National Dairy Development Board providing inexpensive butterfat measurement devices and establishing price schemes that reflected the measured quality, (McMillan, J., 2002). For product qualities of category 5 it is extremely difficult to generate trust in the buyer because these qualities cannot be measured. The successful way here is also to have a brand name, a trustworthy third party assessment of the quality and the constant effort to keep the whole production process and supply chain very transparent.

As mentioned before, organic quality is an extrinsic process quality and thus belongs into the last category. This means that in order to be able to sell organic products for a higher price (reflecting their higher quality) there must be a relationship of trust between buyer and seller. This is accomplished by labeling the product with labels which should convince the buyer that the process and product have been inspected and certified by a trustworthy third party. There are different kinds of third parties. For most of the consumers (in developed countries) the most trustworthy third parties are governmental institutions which are backed up by laws and regulations.

In conclusion it can be stated that laws and certification of organic products are necessary instruments to foster the trust of the consumer in the organic quality of the product by reducing information asymmetry. This leads to the disposition of the consumers to pay higher (fairer) prices for organic products. Especially in the case of imported organic products laws and certification make a market possible where otherwise it would hardly exist. Only on very small and direct markets is it possible for trust relationships to develop without laws, regulations and certification through friendships between sellers and regular clients and personal inspections.

2.2 Evolution of organic agriculture, certification and legislation in Germany / Europe

To put into perspective the situation in Bolivia it is important to present the evolution of modern organic agriculture and certification which has its main roots in Europe, namely in the German speaking countries. The main source for this chapter is Vogt, G., 2000

The roots of organic agriculture go back to the beginning of the twentieth century. With the research results of Justus von Liebig at the end of the nineteenth century about plant nutrition and the development of the Haber-Bosch process in the beginning of the twentieth century to mass produce cheap fertilizer, traditional agriculture changed rapidly. Soon synthetic plant protection agents completed the picture of modern agriculture and farmers adopted these techniques to achieve higher yields. They subsequently became more and more dependent on these agrochemicals and the entire food production was just seen as a function of applying the right amounts of fertilizers and plant protection to a soil that only served as a growing substrate. In this way natural soil fertility was lost and balanced agroecosystems were destroyed.

However some people did not embrace the development but criticized this mechanized view of agriculture and other consequences of the industrial revolution. They had different reasons to do so but they often had a more holistic view of the world and, out of the search for an independent and often communal lifestyle, they wanted to practise a more traditional form of agriculture with only natural inputs to produce healthy and wholesome food. This movement was already taking off at the beginning of the twentieth century. One famous pioneer and the founder of biodynamic agriculture was Rudolf Steiner who gave some courses on agriculture in 1924 describing a farm as a living organism. In Switzerland Dr. Hans Müller developed and promoted a system that tried to close nutrient cycles. In England Lady Eve Balfour experimented with organic agriculture and wrote the classic "*The Living Soil*" and in the USA J. I. Rodale stressed the fact that only healthy soil can produce healthy food. Although this was not a united movement, the basic principles were the same and after World War II the organic movement grew slowly but steadily. Especially during the 1960s and 1970s many young people joined the movement and moved to the countryside.

This development only took place in western countries and societies. Thus in the former communist block and developing countries the concept of organic agriculture⁵ was virtually non-existent.

The need for certification evolves

As the organic movement grew bigger different associations were established as for example the Demeter association for the biodynamic farmers, the Bioland association following the principles of Dr. Hans Müller or the Soil Association of Lady Eve Balfour in England. The members of these farmer groups were all convinced about organic agriculture. They came together and discussed related topics and at a certain point they tried to write down what they considered to be the most important principles of organic agriculture. Like this the first standards were developed, in the beginning often not exceeding more than one or two pages. At the same time the market for organic food developed and consumers were asking questions about the production methods and a guarantee. In many cases organic food was directly marketed from the farmer to the consumer, so the exchange was build on a basis of personal trust. As the market grew and organic products were also sold

⁵ It is important here to differentiate between organic agriculture and traditional agriculture which often is also sustainable and "organic by default".

in special shops, consumers either trusted the shop owner or demanded another level of trust. This need could be satisfied through labels they could trust.

Each organic farmer's association allowed its members to sell their products with the label of the association. Using that label implied that the farmer was managing his farm according to the association's standards.



First schemes of participatory peer control

With the use of labels standards also had to be developed and in order to justify the trust the consumer put into the label, the need appeared to ensure that farmers comply with these standards. As the members of the associations were meeting regularly in their regional groups anyway the idea developed to have the meeting each time at a different farm and like this the farmer's farms would be inspected by the colleagues. This was still a system based on trust and solidarity within the organic associations but as the markets slowly grew, the standards were developed further with more specific guidelines referring to farm inputs, space for animals and even processing methods. The internal certification systems of the associations had to follow these developments and were improved continuously.

Official standards call for third party certification

With the growing demand for safe and healthy food due to food scandals and crisis such as BSE in Europe there were more and more products on the shelves bearing green logos stating organic, ecological or natural quality. This led to confusion among the consumers as to how these products were controlled and what standards lay behind these numerous labels and claims. The organic associations and industry were aware that credibility would be lost if there was no common legislation for the use of these organic words and therefore they lobbied for it in the European Union. After the European regulation (EEC2092/91) was passed only products complying with it could be marketed with organic claims.

This meant that the compliance had to be checked and the regulation called for inspection and certification by accredited certification bodies compliant to the ISO65/EN45011

norm. These annual inspections cost the farmers money and confront them with the requirements of extensive record keeping of the organic origin of seeds, feeds, animals and other inputs. Furthermore, the inspectors are not allowed to give advice to the farmers they inspect, because this would be seen as a conflict of interest.

As a result, the consumers can be pretty sure that only truly organic products are able to make organic claims and a price premium was justified. That brought a boost in the demand for organic products which even led to situations where the supply did not meet the demand. The farmers associations go on using their labels along the obligatory national (EU) label, claiming their standards are higher than the EU ones.

On the international level other countries developed their own legislation and control systems like the NOP in the United States or JAS in Japan. The private sector established the [IFOAM norms](#) and organic agriculture was included in the Codex Alimentarius of FAO and WHO with the [CAC/GL 32-1999 standard](#).

2.3 Experiences in other Latin American countries

As the main subject of this study is Bolivia, the brief country descriptions below cannot go into too much detail. They are intended to serve as an orientation for the reader to put the Bolivian situation into perspective of the Latin American context and show the relevance of the topic also for these countries. Most of the information is taken from Willer, H. et al., 2008 and [Gemelli, M., 2003](#) where not otherwise stated. The individual country profiles are all structured in the same way: First the statistics of certified area and farms, then the organic export markets and products followed by a list of active organic certifiers. The next paragraph is about the local market followed by a description of the main actors in the national organic movement. The last part of the country profiles is about the current organic legislation. This overview, especially the details about the legislation, might be a useful starting point for further comparative studies.

2.3.1 Chile

Organic agricultural area: 9,464 ha (0.06% of total agricultural land)

Organic wild collection area: 30,000 ha

Number of organic farms: 1,000 (2006 data)

According to Willer, H. et al., 2008 organic production in Chile is almost completely export-oriented (90%). Chile has the advantage that it can produce off-season for the northern markets, with the main destination being the US (70%). It mainly exports fresh products like vegetables, apples, cherries, asparagus, blueberries, avocado, citrus, kiwi and olives. More and more processed products like wine, olive oil and fruit juices and concentrates complete the product range and also meat, mainly lamb and organic salmon are being exported.

The products are certified by international agencies like [BCS](#) / Germany and [IMO](#) / Switzerland and three national certifiers including [CCO](#) (Certificadora Chile Orgánico), [CIAL](#) (Corporación de Investigación en Agricultura Alternativa) and [PROA](#) (Corporación de Promoción Agropecuaria).

The local market is very limited but there exist some home delivery services in bigger cities. Supermarkets often have a range of organic fruit and vegetables and some specialized shops like [Tierra Viva](#) and [La Ventana Orgánica](#) exist.

The organic movement in Chile has been growing since the mid 1980s, mainly as the result of efforts made by NGO projects. When the export market evolved in the 1990 the producers and other stakeholders also formed an organization to represent and lobby for the sector, in 1999 the [AAOCH](#) (Agrupación de Agricultura Biológica de Chile) was founded which is a member of [MAELA](#) ([Movimiento Agroecológico Latinoamericano](#)) and IFOAM.

A national law ([Nr. 20.089](#)) for organic production, processing and trade was passed on January 17th of 2006 naming the [SAG](#) (Servicio Agrícola y Ganadero) as the competent authority to manage the control system. The [regulation](#) for this law was passed on the 5th of August 2006 and became legally valid the 1st of February 2007. The law allows for alternative certification for the local market and direct sales as specified in article 3 of the law and article 26 of the regulation.



Further information on the law can be found on the website of the [SAG](#) and for further information on the the market for organic products in Chile the Ministry of Agriculture published a market study [ODEPA, 2007](#).

2.3.2 Argentina

Organic agricultural area: 2,220,489 ha (1.7% of total agricultural land)

Organic wild collection area: 606,974 ha

Number of organic farms: 1,486 (2006 data)

After Australia and China Argentina has the world's third largest area under organic production. Nevertheless most of this area (2,164,200 ha) is extensive cattle and sheep ranches on permanent grasslands. Ninety percent of the production is for export with the major markets being the EU and the US and the major products being meat, cereals, oilseeds, fruits, and some vegetables. Processed products are also exported as for example, olive oil, sugar, concentrated juices, honey and wine. Other products include aromatic and medicinal plants and organic wool.

All these products are certified by the more than twelve national certifying bodies the most important of which are [Argencert](#) and [OIA](#) (Organización Internacional Agropecuaria), [Bio Letis](#), [Food Safety](#), APROBA (Agro Productores Organicos de Buenos Aires), Ambiental and MOA (Fundación Mokichi Okada).

The local market for organic products started to grow in the 1990s with home deliveries and special shops but quickly expanded also to supermarkets which have a full range of organic products. In the economic crisis after the turn of the century the local consumption decreased but now a wide variety of products have returned to the shelves. Some supermarket chains have even developed their own organic brands. In the field of the specialized shops El Rincón Orgánico has made itself a worldwide renown name for operating almost 20 years offering more than 200 organic products to customers in Buenos Aires.

The organic movement in Argentina is led by [MAPO](#) (Movimiento Argentino para la Producción Orgánica) but also several other organizations are active in the sector like [CAPOC](#) (Cámara Argentina de Productores Organicos Certificados), a commerce chamber for organic producers and a multitude of local and regional networks. There are also university courses and investigations into organic agriculture like a degree program at the university of Buenos Aires (UBA), "*Tecnicatura en Producción Vegetal Orgánica*". Also the INTA (Instituto Nacional de Tecnología Agropecuaria) has carried out research on organic production systems.

On the legal side Argentina was the first Latin American country to pass a legislation as early as 1992. Today [law 25.127](#) from 1999 along with its legal framework is valid. The

[SENASA](#) is the competent authority. Along with Costa Rica Argentina is the only Latin American country with third country status according to EEC2092/91 in the European Union.

Further information on Argentina's organic sector can be obtained at the websites of the mentioned institutions and detailed production information for 2006 is contained in [SENASA, 2007](#).

2.3.3 Paraguay

Organic agricultural area: 17,705 ha⁶ (0.07% of total agricultural land)

Number of organic farms: 3,490 (2006 data)

Paraguay does not have a big organic sector. The main organic export commodity is sugar, which accounts for over 95% of the organic land. Other products include maté, cotton, sesame, soya, fruit, vegetables and some spices and medical plants ([AlterVida, 2008](#)).

The products which are for export are certified by foreign certification bodies and the local market is almost non-existent with the exceptions of some direct marketing or the occasional organic product on the supermarket shelf.

In Paraguay there is also a long history of NGO projects that have tried to promote organic agriculture. At the moment the NGO [Alter Vida](#) is leading this movement. They also initiated a project that specifically tries to consolidate the organic market and its organizational structures which can be reached at the website www.productosorganicos.org.py.

With the help and lobby work of the FAO and Alter Vida the government also passed organic legislation on the 6th of June 2008 consisting in [law 3.481](#) and [ministerial resolution 893](#) of the MAG (Ministerio de Agricultura y Ganaderia). There is still a long way ahead before complete implementation.

In Paraguay there is also the problem of the aggressively expanding industrialized soya production which uses GMO varieties and [destroys local communities](#).

⁶ This figure is from Willer, H. et al., 2008 but the Paraguayan NGO AlterVida states a figure of 44.290 ha for 2007 on its website www.productosorganicos.org.py

2.3.4 Brazil

Organic agricultural area: 880,000 ha⁷ (0.3% of total agricultural land)

Organic wild collection area: 5,600,000 ha

Number of organic farms: 15,000⁸ (2005 data)

Brazil has a big economy and also has some considerable organic exports. The big extension of organic land is owed mainly to pastures which make up 75% of it. The main organic export crops are coffee, bananas, soya and corn but also vegetables and fruit like apples and grapes are exported. The major processed products are meat, concentrated fruit juices, sugar and processed soya.

These products are certified by the 12 national and 9 international certifying bodies active in Brazil, some examples of which include [IBD](#) (Instituto Biodinamico), [AAOCERT](#) (Associacao De Agricultura Organica) and [IMO](#) Brazil.

The national market for organic products in Brazil is Latin America's most developed one. The main marketing channels today are supermarkets with 45%, followed by markets (26%) and specialized stores (16%). The rest is marketed through home delivery or innovative systems like consumer cooperatives. Fresh vegetables and fruits are the products with the highest demand but there are also processed organic products on the market like tea, coffee, mate, jams, oils, breakfast cereals and dairy products. In Brasilia there exists a completely organic supermarket managed by a producers cooperative and an organic hamburger shop which sells organic fast food.

The organic movement in Brazil started in the 1970s as part of a counter movement to the green revolution. In 1981 the "Brazilian Meeting on Alternative Agriculture" took place and from that time different NGOs also promoted organic agriculture through their projects. In 1989 the AAO ([Associacao De Agricultura Organica](#)) was formed. Today there are numerous institutions promoting organic agriculture including for example the [Eco Vida Network](#) which is a producers and consumers network. But also the Ministry of Agrarian Development is involved in promoting ecological agriculture as an alternative to the multitude of small farmers in the country. In 2005 "Programa de Desarrollo de Agricultura Orgánica (Pro-Orgánico)" was initiated to stimulate the production and domestic consumption of organic products This program had funds of almost one million US Dollars.

⁷ This number does not include all the small farmers that are members of alternative certification and marketing schemes

⁸ Ibid (the number of small farmers is estimated to be around 190,000)

The legal framework for organic production, processing and marketing is laid down in [Law 10831/2003](#) from December 23rd 2003. The regulation ([Decreto n° 6323](#)) for that law was passed on the 27th of December 2007. The legislation provides organic farmers with an alternative to the third party certification system in that the local certification is also possible through participatory guaranty systems ([PGS](#)). In Brazil such a system is already working within the [ECO Vida Network](#).

For more information on the situation in Brazil the website www.planetaorganico.com.br is a good starting point and of course the institutions mentioned above.

2.3.5 Peru

Organic agricultural area: 121,677 ha (0.6% of total agricultural land)

Organic wild collection area: 148,942 ha

Number of organic farms: 31,530 (2006 data)

In Peru the vast majority of organic production (97%) is exported mainly to US and EU markets. Of these exports 94% are coffee and cocoa. Another growing organic export are bananas and the rest are products such as quinoa, cotton, pecans, brazil nuts, onions, asparagus, sesame seeds, amaranth and tomatoes. The whole export market for 2006 was estimated at around 100 million US Dollars.

These products are certified by the national certifier [Bio Latina](#) and international certifiers such as SKAL, IMO and SGS. Most of the coffee is certified via group certification of smallholder groups and associations.

The national market for organic products has had a steady and successful growth with the main products on demand being vegetables (43%), fruits (41%), beans (9%) and tubers (7%). Different NGOs have promoted weekly organic markets of which the [Bio Feria](#) in Lima of the “[Grupo Eco-Lógica Peru](#)” is a prime example with great success since 1999. There are also home deliveries and the presence of organic products in supermarkets and specialized shops in the bigger cities. The sales through these channels are estimated to amount to half a million US Dollars. In the smaller cities like [Huanuco](#) “Ferias Ecológicas” are also taking place, often guaranteeing the organic quality through participatory guarantee systems (PGS).

The ecological movement in Peru started in the 1980s through development projects and NGOs. At the end of that decade (1989) the RAE (Red de Agricultura Ecológica) was

founded which connected the different stakeholders. Then in 1996 the National Ecological Producers Association ([ANPE](#)) was formed. There are numerous other important NGOs such as [Centro Ideas](#) and also public institutions such as [IDMA](#) (Instituto de Desarrollo y Medio Ambiente since 1984) or the agrarian university of [La Molina](#) involved with the organic movement. ([CONAPO, 2004](#))

The legal framework is given by the technical regulation for ecological products of 2003 ([Resolución Ministerial No. 0076-2003-AG](#)) which was elaborated by the CONAPO (Comisión Nacional de Productos Orgánicos). The [SENASA](#) (Servicio Nacional de Sanidad Agraria) is the national competent authority to implement and supervise the national control system. In January 2008 [law No. 29196](#) was passed. Among others it institutes the CONAPO with a different name - Consejo Nacional de Productos Orgánicos – to develop new proposals and counsel the ministry on the topic of organic agriculture. There is still an ongoing process to develop and change the legislation especially for the introduction of alternative certification systems.

Further information can be found on the websites of the institutions and NGOs mentioned above. Another source of updated information is [USDA, 2008](#).

2.3.6 Ecuador

Organic agricultural area: 50,475 ha (0.6% of total agricultural land)

Organic wild collection area: 148,942 ha

Number of organic farms: 31,530⁹ (2006 data)

The main organic export crops are cocoa, bananas and coffee. Other products include quinoa, citrus fruits, mangoes, pineapples and sugar. There is also a significant export of aquaculture products such as shrimp and tilapia. A considerable share of the products are also exported with Fair Trade certifications.

These products are certified by four officially registered certification bodies which are [BCS](#), [Ceres Ecuador](#), [Control Union Peru](#) and [Ecocert](#). Additionally [Bio Latina](#), [Naturland](#) and [OCIA](#) are active in Ecuador.

The national market for organic products is very small and there is very little information about it. There are some natural shops in the big cities and organic products can be found occasionally in the supermarkets there.

⁹ This number refers to associations and not individual farmers.

The organic movement in Ecuador is led by [Acción Ecológica](#) which was formed in 1986 and there also exists an Ecuadorian Corporation of Biological Producers ([PROBIO](#)). There are also other active national and international actors.

The legal framework for the organic sector was prepared in January 2003 through “Decreto Ejecutivo No 3609” which was updated by the “[Normativa General para Promover y Regular la Producción Orgánica en el Ecuador](#)”. The specific regulation for the national norm from October 2006 is the “[Acuerdo Ministerial N-º 302, Registro Oficial 384](#)”. The norm calls for a “Comité Nacional para la Agricultura Orgánica” composed of representatives of different private and public entities to develop new proposals and counsel the ministry on the topic of organic agriculture. The [SESA](#) (Servicio Ecuatoriano de Sanidad Agropecuaria) is the competent authority implementing and controlling the national organic system. On its website the lists of registered certifiers and operators are available.

Further information can be found on the websites of the institutions mentioned above or additionally on the website of the Ecuadorian ministry of agriculture on the topic:

<http://www.sica.gov.ec/agronegocios/productos%20para%20invertir/organicos/principal.htm>

2.3.7 Costa Rica

Organic agricultural area: 10,711 ha (0.4% of total agricultural land)

Organic wild collection area: No specified area

Number of organic farms: 2,921 (2006 data)

Costa Rica's main organic exports are banana puree (for baby food), cocoa, coffee, sugar, spices and medicinal herbs, blackberries, orange pulp, mango, and pineapple. Some minor quantities of fresh vegetables are also exported.

These products are certified by two national certifiers, Eco Lógica and AIMCOPOP (Central American Institute for the Certification of Organic Products) and three registered international certifiers which are BCS, Control Union and OCIA.

The national market for organic products is relatively well developed with a wide range of products being sold on markets, in shops, supermarkets and through home delivery services.

The organic movement in Costa Rica has a long history and its roots lie in the rejection of the green revolution. Commercial organic projects started as early as 1984 ([Costa Rica](#),

2000). In this year also [CEDECO](#) (Corporación Educativa para el Desarrollo Costarricense), a leading Costa Rican agro-ecological NGO, was founded. Other important NGOs are [MAOCO](#) (Movimiento de Agricultura Orgánica Costarricense) and [COPROALDE](#). There is also very strong governmental support for organic agriculture in Costa Rica, for example through the “[Programa Nacional de Agricultura Orgánica](#)” which, among others, prepares promotional materials and developed a [portal for organic producers](#).

On the legal side Costa Rica has had a national regulation for organic production since 1997. Today a new version from the 18th of September 2000 is in place which is the “Reglamento sobre la Agricultura Orgánica”, [executive decree No. 29782](#) of the Ministerio de Agricultura y Ganadería. The implementing agency is the [SFE](#) (Servicio Fitosanitario del Estado), which also provides updated statistics. The national control system has been recognized as equivalent by the European Union in 2003, which means that Costa Rica has a third country status according to EEC2092/91 in the European Union.



Further information can be found on the websites of the institutions mentioned above. For a study of the internal market for organic products refer to [CEDECO, 2001](#).

2.3.8 Mexico

Organic agricultural area: 404,118 ha (0.4% of total agricultural land)

Organic wild collection area: 12,647 ha

Number of organic farms: 126,000 (2006 data)

Mexico has the highest absolute number of organic farms in the world due to the multitude of small coffee farmers which make Mexico the world's largest organic coffee producer. Apart from coffee there is considerable export of organic cocoa, honey, vegetables, sesame seeds, blue corn and maguey. Furthermore there is organic production and export of almost all crops like for example vanilla, banana, papaya, apple, avocado, medicinal plants, soya, palm oil and nuts. Of the total organic production around 85% are exported especially but not only to the North American market to which, as a NAFTA member, Mexico has easier access. These exports were valued at around 430 million US Dollars for 2007.

The organic products are certified by around 18 certifiers including one national certifier which is [Certimex](#) and several international certifiers such as IMO, BCS, OCIA, Naturland, Bioagricert, Oregon Tilth Certified Organic, Quality Assurance International and others.

The national market for organic products is not very developed but is growing. In supermarkets, special shops and markets mainly in the big cities (Mexico, Monterrey y Guadalajara) there is a range of fresh organic products available. Also processed products like coffee, fruit jams and chilli sauces can be bought. [Aires de Campo](#) is successfully marketing a range of organic products in its BioCentro stores. In the big cities there are also weekly fairs called “[Tianguis orgánico](#)” which sell organic products and some of them are also developing a PGS. On a national level there is an annual organic trade fair called [Exporgánicos](#). There is more potential in the local market because still a lot of the excess organic production that is not exported is marketed locally undifferentiated through conventional channels.

The roots of organic agriculture in Mexico can be traced to biodynamic German immigrants in the 1930 but it was not until the 1980 that the movement picked up speed and organic production spread on larger national scale. There is no national organic producers organization but the Chapingo University does [organic farming research](#) and promotes local [organic markets](#).

Since 1997 in Mexico there has been an official norm ([NOM-037-FITO-1995](#)) for organic production but it took a long process before the “[Ley de Productos Orgánicos](#)” which is the current legal text was passed on the 7th of February, 2006. The main responsible body for organic production and control systems is the Secretary for Agriculture ([SAGRAPA](#)) which acts through the National Agriculture and Food Safety Service ([Senasica](#)). A “Consejo Nacional de Producción Orgánica” was formed and is composed of members of public and private institutions and has a counselor status. The law mentions the possibility for participatory certification schemes explicitly in article 24. There is also a [new legal project](#) to regulate sustainable / organic aquaculture and fisheries.

Further information on the organic sector in Mexico can be found on the websites of the institutions mentioned above. For a detailed study of organic production refer to [Gómez Cruz, et al., 2005](#) .

3 Methodology and material

The author visited Bolivia from September 2007 to March 2008 and the present work was compiled by using the quoted literature and data collected through interviews and surveys in the time from December 2007 until March 2008.

3.1 *Analysis of law 3525/06*

The analysis of law 3525/06 and its implementation was carried out in a straight-forward approach taking the legal texts as a basis and then identifying the persons who were and/or are involved in the processes of drafting, passing and implementing the law. The next step was to contact these people and to ask them for interviews. For the interviews a structured questionnaire (see Annex VI) was developed with questions mainly focusing on possible problems in the implementation and possible improvements to the law. Starting with these questions additional questions were asked and a dialogue developed. Main opinions and points were written down in a notebook. The results of the questionnaires were entered into a database and the software SPSS was used to analyse the data and generate comprehensive reports for the answers to the different questions. By this method it is possible to get an idea of the problems and assess the probability of a successful implementation of the law by analysing the expert's opinions.

The critical point was to identify the right persons (experts) and to get their opinions. The author contacted various stakeholders, and involved organisations like AOPEB (the organic farmers association of Bolivia), the SENASAG (Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria), the MDRAyMA (Ministerio de Desarrollo Rural, Agropecuario, y Medio Ambiente) and four certifying bodies (IMO, Biolatina, Bolicert and Ceres). Additionally, private persons were contacted who were involved in the process in earlier stages like Nelson Ramos Santalla (formerly AOPEB), Franz Augstburger and Jochen Neuendorf (Consultants). The contact was established by e-mail and telephone. The questionnaire was converted into a pdf-form, which was attached to the contact e-mails. This was not a successful method and only one of the questionnaires was filled out and sent back. Nevertheless contact was established in most of the cases and personal interviews were conducted including the questionnaire. A further problem was that most of the experts live and work in La Paz and the author lived and worked in Cochabamba which complicated the coordination of the interviews even more.

A total of 12 questionnaires could be collected with five female and seven male experts all of them working with ecological agriculture and eight of them working with certification. In a self assessment on a five grade scale, five of the experts claimed to have profound knowledge of law 3525/06 and all related aspects. Another five stated that they knew the law and had read it. The remaining two experts had not read it completely but knew the structure and contents of the technical norm.

3.2 Analysis of the market

For a market analysis it is necessary to analyse the demand (consumers), the supply (producers), the distribution infrastructure and the institutional and legal framework as well as potential competitors and substitutional products. To do a thorough market study for ecological products in the national Bolivian market would mean to define a target group of consumers, investigate or estimate how big this group is in Bolivia and in the different cities within Bolivia, take a statistically significant sample out of this group using a random sampling method and survey them about their preferences and habits. A similar procedure would have to be applied when analysing the supply (producers) with the difference of the lower number of the sample but a bigger heterogeneity in the group. Additionally other market actors, especially intermediaries would have to be surveyed and the legal and institutional framework would have to be analysed.

This kind of thorough market study was impossible for the author to conduct because of limited resources (time, financial and logistic resources). To get at least an idea about the situation in the market the author conducted a small field study with producers, retailers and consumers without defining an exact target group or using the proper random sampling methods or sample sizes. So the results of this survey cannot be taken as representative for the whole national market in Bolivia but they can provide a basic impression of it. The results were analysed using the statistical software SPSS.

Producers / Processors

Most producers / processors were contacted during the “Expoferia Nacional de Productos Ecológicos” which took place in La Paz from the 13th until the 16th of December, 2007. The questionnaires (Annex II) were distributed and conversations took place. Unfortunately some producers were reluctant to fill in information in the questionnaires. In addition to these interviews some producers around Cochabamba and in Samaipata (Santa Cruz) were visited, interviewed and asked to fill out the questionnaires. Most of the producers

and processors are not certified (yet) and so all who considered themselves ecological were eligible to take part in the survey. An approach to contact all the producers affiliated to AOPEB via an e-mail list and send the pdf-forms to be filled out and sent back was not successful probably due to the complicated process of saving the filled out questionnaires and send them back. A web based questionnaire would have been more appropriate for this approach.

At the end the number of collected questionnaires was 28. Of these producers fifteen were from La Paz, three from Cochabamba, five from Santa Cruz and another five did not specify their location. The majority of the respondents were male (22) and thirteen were owners of the business while fifteen were employees. Eleven were pure processors while eight were both, producers and processors. Another eight were pure producers.

Retailers / Shops

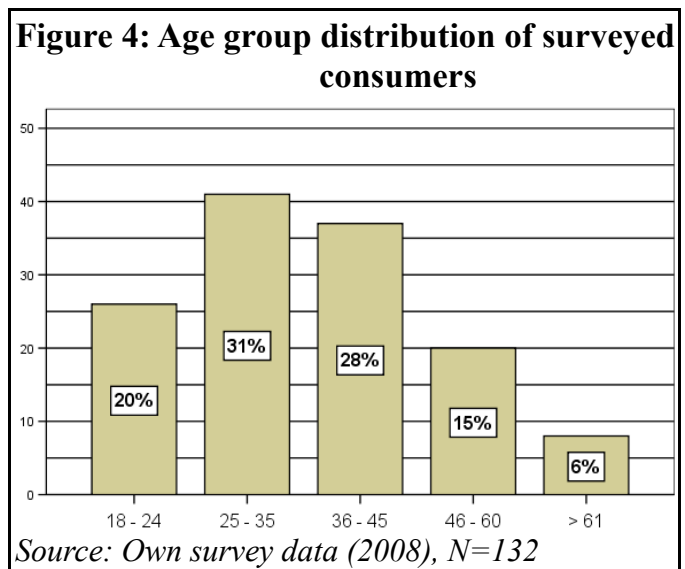
For the retailer or shop questionnaires (Annex III) the author identified and visited “Eco”, “Health” and “Natural” shops in the cities of Cochabamba and La Paz where he asked the clerks or owners to fill out the questionnaires. Some of these questionnaires were also filled out by participants at the “Expoferia Nacional de Productos Ecológicos”.

A total of 14 questionnaires could be collected with four being filled out by the owner of the shop and 10 by employees. Nine respondents were female and five were male. Nine of the shops were in La Paz, four in Cochabamba and one in Potosí.

Consumers

To get a usable amount of filled-in consumer questionnaires (Annex IV) the author distributed these to different “Eco” “Health” and “Natural” shops, a vegetarian restaurant and a yoga centre in Cochabamba and La Paz to have them filled in by their clients. A poster was made announcing the survey and promising a little sweet as a thank you. The success of this approach was very different from location to location, as in some shops the personnel changed fast, forgot about the questionnaires or took them home. Another opportunity to contact consumers and have them fill out the questionnaires was at the “Expoferia Nacional de Productos Ecológicos”, where the author could collect data of 51 consumers. A few more questionnaires were filled out in various other locations. One should bear in mind that those who filled out the questionnaires were mainly consumers who were already interested in ecological products.

Altogether 139 consumers were surveyed, 76 in La Paz and 63 in Cochabamba. The gender was quite equally distributed with 66 males, 65 females and eight missing values. Also the age groups followed a quite normal distribution as observable in Figure 4. Most of the respondents (82%) had a university education and only two stated primary school as their educational level. The majority of the respondents (71%) live in



households of four members and more and 63% stated that they were responsible for food purchases in their household.

Experts

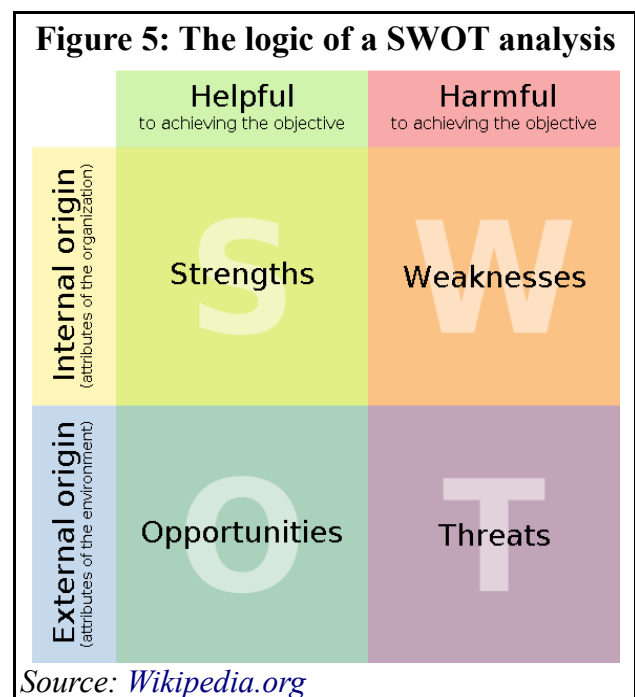
In order to validate the results of the consumer surveys and get a stronger plausibility, additional expert questionnaires (Annex V) were designed which were handed out to experts in the fields of ecological production, marketing and rural development. The questions in these questionnaires reflected the questions in the consumer questionnaires and the experts were asked to estimate / predict some of the results of the of the consumer and producer survey (i.e. What is the age distribution of the ecological consumers in Bolivia – please fill in a percentage in each age category). To assess the expertise of the experts the first part of the questionnaire asked them about their experience with ecological agriculture and rural Bolivian reality.

The experts were staff of AOPEB, certifying bodies, different NGOs and some experienced producers, altogether thirteen, seven male and six female. They all had post-secondary education and nine even held post-graduate titles. They all worked either with ecological products or agricultural development, eleven of them with both, and had a solid level of ecological knowledge.

To put the survey results further into perspective the author also searched for secondary data. It is very difficult to obtain information on local ecological production and consumption patterns in Bolivia because either there is no data or the few studies that are conducted are not published or they are not listed and catalogued by appropriate institutions such

as the AOPEB¹⁰ which makes them very difficult to find. The author was able to find four other market studies. They all focus on specific aspects of regional markets for ecological products. The first study¹¹ was conducted 2006 by AOPEB as part of the FAO project TCP/RLA/3006 to promote the sale of ecological vegetables produced and marketed by ACSHA in La Paz. The second study is a preliminary market study conducted in 2004 by the [Fundación Agrecol Andes](#) for their ECO Feria project in Cochabamba. The third study by Dr. Marco Gemelli¹² was conducted in 2002 in the La Florida province of Santa Cruz in connection with the FAO project “GCP/INT/542/ITA –1992/2002” which was helping to establish the ecological women's producers association ASOPEC. The last study is a thesis by Helmut Jacob of the University of Kassel. In 1997 he did an internship with AOPEB and conducted a market study for them in La Paz. Another qualitative study was conducted by Christina Keys of Guelph University / Canada in 2007 but no results were available yet.

To integrate the results of the surveys and the secondary data and finally assess the overall market situation for ecological products in the face of the new legislation, the technique of the SWOT analysis was chosen. SWOT is an acronym for Strengths, Weaknesses, Opportunities and Threats. With a set objective in mind (in this case the increase in the market share for ecological products on the market for food in Bolivia) firstly the internal and present strengths and weaknesses are examined and then the external present and maybe future opportunities and threats. This technique is most commonly used to assess the situation of projects, companies or other individual entities. In the present work it is used to describe the situation and perspectives of a whole market segment, namely the market for ecological products. Figure 5 shows the logic of a SWOT analysis.



10 Two of the studies that were found were conducted in close cooperation with AOPEB but when the author asked AOPEB staff about market studies it was only known that they existed but it was impossible to find them.

11 [FAO, 2006b](#)

12 [Gemelli, M., 2003](#)

In conclusion it can be stated that a mix of methods, both qualitative and quantitative, was applied including structured questionnaires for producers, retailers and consumers which were complemented by expert questionnaires, interviews and secondary data collection to be able to arrive at a structured qualitative assessment as is the SWOT analysis.

4 Bolivia

Bolivia is a landlocked country in South America. It is marked by its topographical, climatic, biological, cultural and socio-economic diversity.

4.1 *Basic country facts*

With an area of 1,098,580 km² it is South America's fifth largest country and with a population of 9,247,816 (July 2008 est.) it ranks number eight in South America. The resulting low population density of around 8 persons per km² is only higher in South America to those of Suriname and Guyana (CIA, 2008). Administratively Bolivia is divided into 9 Departamentos (La Paz, Oruro, Potosí, Chuquisaca, Tarija, Santa Cruz, Beni, Pando and Cochabamba) and subdivided into 112 Provinces¹³. Although the city of Sucre is the constitutional capital, the parliament, the seat of the government and general administrative center of the country is in La Paz. Bolivia is a constitutional and democratic republic, headed by President Evo Morales Ayma who ascended into office in 2006.

Topographically the country is commonly divided into three mayor parts:

1. The high plains of the “altiplano” above 3000 m of altitude (28%)¹⁴
2. The sub Andean valleys “valle” at around 2500 m of altitude (13%)
3. The lowlands “llanos” (59%)

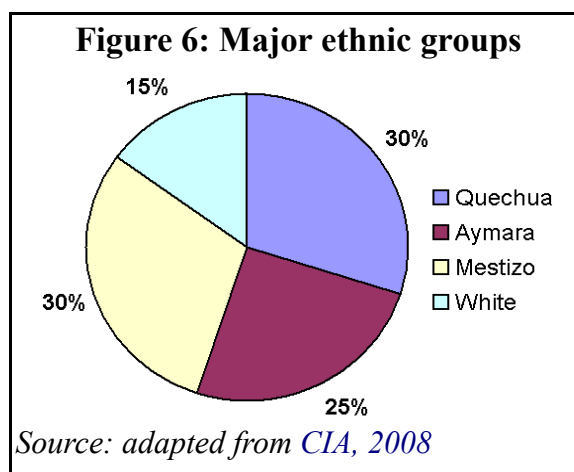
This topography poses a big challenge to the expansion of infrastructure like roads or the electrical grid. Even the main national road (the only one that is asphalted on its whole length) that connects La Paz, Oruro, Cochabamba and Santa Cruz is frequently blocked by mudslides in the difficult descent from the highlands into the lowlands.

¹³ For a political map see Annex I

¹⁴ The percentages represent the occupied area (INE, 2006, chapter 1.02)

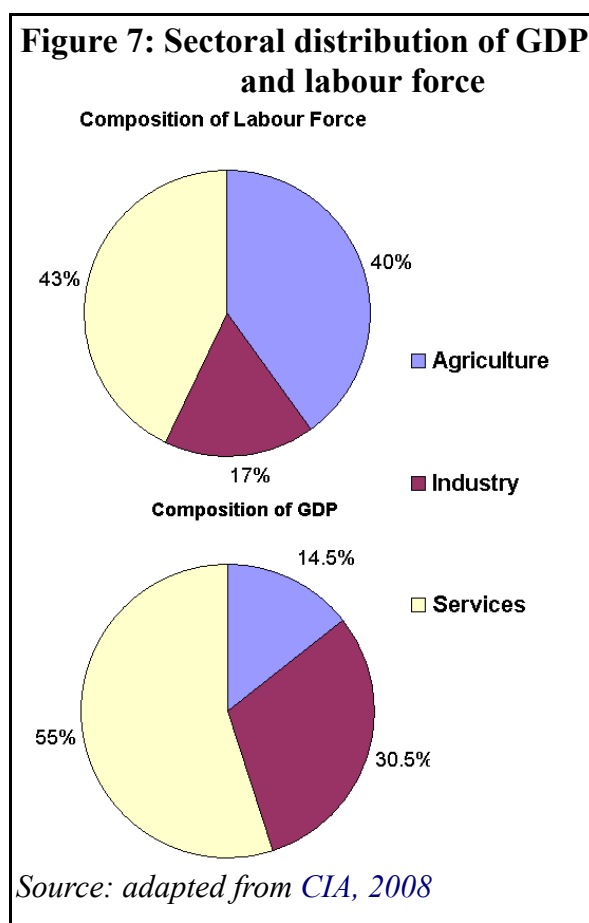
4.2 Socio-economic framework

As mentioned before, Bolivia is a very diverse country. This also holds true when looking at the ethnic composition of the population as seen in Figure 6. Bolivia is the country in Latin America with the highest percentage of indigenous population. Especially in rural areas of the *altiplano* and *valle* regions the people lead a very traditional lifestyle mostly depending on subsistence agriculture.



Although Bolivia is rich in natural resources like metals or natural gas it is one of the poorest South American countries, with an overall poverty rate of around 60%¹⁵ and 39,5% (in rural areas 62,3%)¹⁶ of the population living in extreme poverty. The GDP per capita was at 2,819 \$ US PPP in 2005 and the Human Development Index (HDI) of Bolivia is 0.695 which places it on rank 117 in the world (UNDP, 2008). The poor living conditions, especially in rural areas of the *altiplano* drive the people to migrate into the cities or new settlements in the tropical lowlands like the Chacabare region, areas where often coca is being cultivated to achieve a steady and sufficient income. The total share of the urban population arrived at the level of 62% in the 2001 census, 65% of which lived in the 3 main urban areas of La Paz, Santa Cruz and Cochabamba¹⁷. The rural population lives mainly (80%) in the *altiplano* and *valle* regions (MDRAYMA, 2007a page 9)

The sectoral composition of the GDP and the labor force is depicted in Figure 7. This



15 Different sources: UNDP 62,7% ; CIA 60%, INE 63,12% (2001 data)

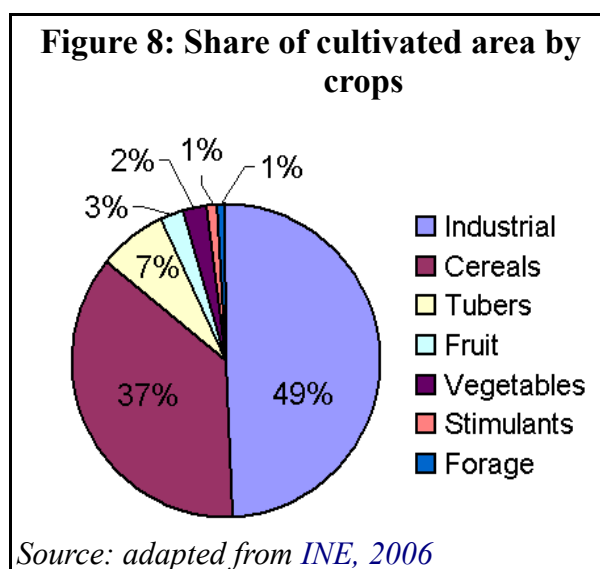
16 INE, 2006 Table No. 3.06.01.02, (2002 data)

17 La Paz = La Paz-Achocalla-El Alto-Viacha; Cochabamba = Cochabamba -Quillacollo - Sacaba - Colcapirhua - Tiquipaya - Vinto

figure shows that still a big share of the workforce (40%) is employed in the agricultural sector yet it only contributes only 14,5% to the Bolivian GDP. Moreover, as [World Bank, 2005](#) describes on page vi: “in 2002, more than 55 percent of the labor force was in the informal sector, either as self-employed (40 percent) or salaried workers (15 percent). An additional 10 percent of workers were unpaid, principally working in family businesses or are apprentices.”

4.3 The agricultural sector

Three percent of the Bolivian land is arable and 31% is used as pasture¹⁸. The people who work in the agricultural sector according to INE, 2004 have the lowest average income with 252 Bs a month for women and 504 Bs a month for men¹⁹. The structure of the agricultural sector varies greatly between the western *altiplano-valle* region and the eastern lowlands. Whereas in the former agriculture is carried out mainly by small farmers producing mainly food for subsistence and local markets, in the latter it is characterized by big rapidly growing corporate farms using modern technology to produce industrial crops for export. In the eastern lowlands there are also the biggest cattle herds and grazing areas. The land is distributed very unevenly between these two kinds of agricultural approaches. About 53% of the farms have less than 50 ha of land and all together cultivate less than 0.5% of the agricultural area while 42 farms (less than 0.1%) of over 50.000 ha cultivate almost 7% of the agricultural area²⁰. This situation is also depicted in Figure 8 which shows the share of area by the different crops planted. The industrial crops occupy the biggest share of the land with 49% out of which 80% correspond to soya and 10% to sugar cane. Soya is by far the most important export crop. Of the 29% agricultural share in total exports²¹, over 66% correspond to soya products (oil, cake and beans)²².



18 [FAO, 2006a](#)

19 At an exchange rate of 7,8 to the US \$ this would be 32 \$ US and 65 \$ US respectively.

20 [MDRAyMA, 2007a](#), page 12

21 This is not taking into account the illegal export of coca or cocaine of which Bolivia is the worlds third largest producer.

22 [FAO-STAT, 2006](#) and [FAO, 2006a](#)

The new government under President Evo Morales has identified these structures of unequal distribution of land and the strong orientation towards export crops among others as the cause for constantly rising food prices, loss of national food self-sufficiency and the need to import food not mentioning the social unrest this situation is causing. That is why in the frame of the national plan of development: “*dignified, sovereign, productive and democratic Bolivia, to live well*” (Republica de Bolivia, 2006) a plan for a so called “*rural, agrarian and forestry revolution*” (MDRAYMA, 2007a) was developed to change the situation. Special emphasis has been placed on small producers, food sovereignty, redistribution and access to land, ecological and sustainable production. As there is a strong political opposition and struggle in Bolivia at the time this is written the implementation and success of this government program is unclear.

4.4 Government control over the local market

The government control over the local market is very limited if looking at figures like a shadow economy that looms around 68,3% of the official GDP²³ or a share of illegal (contraband) imports that is 34% of total imports and amounts to 10% of the GDP²⁴. The picture is completed when considering that Bolivia ranks on place 105 (2007) on Transparency International's Corruption Perception Index (CPI)²⁵

The government agency to control and certify phyto-sanitary, veterinary, and food-safety aspects of agricultural production and trade in Bolivia is the SENASAG, which was founded in 2000. Its main instrument in controlling food-safety is the “*Registro Sanitario*” which is obligatory for importers, processors and packagers of food products. Since 2002 all pre-packaged processed food has to be registered and bear the registration number, name and address of the producer and the date of expiry. The registration of all the operators and the process of inspection and certification is not yet complete and there are still a lot of products on the market (especially open air markets) that are not labeled nor controlled according to the law. From time to time, - especially before holidays - a few concentrated de-commissioning operations are carried out in the markets and some operators are (temporarily) shut down. These operations are almost always accompanied by PR campaigns including television, radio and press coverage to raise the consciousness of the population about the hazards of unregistered and unlabeled food²⁶. Nonetheless, as mentioned be-

23 Schneider F., 2006

24 CAINCO, 2008

25 Transparency International, 2007

26 To get an idea of the situation the reader may refer to online press articles of *Los Tiempos*, 27.07.05...contd. on p. 28

fore these regulations only apply to processed goods and there is virtually no control of the (mis-)use of (forbidden) agrochemicals in the production of the raw materials although there is a system for registration in place²⁷ for these. In fact, the only agricultural products which are controlled regularly by the SENASAG are export products. These products must have the complete sanitary documentation to leave the country.

In conclusion it can be stated that governmental control over the local market is very limited due to a big informal and also illegal sector. The existing control mainly focuses on processed and packaged goods. The broad range of fresh products sold directly in the markets is all too often neither controlled nor registered.

4.5 The production and export of certified organic products

Only products that are certified by accredited certifying bodies can be exported into the major northern markets for organic products, which are in the USA, EU and Japan. These countries and regions each have their own legislation on organic production and the certifying bodies have to get the accreditation of each one of them in order to be able to certify according to their standards. Those accreditations are costly and have to be renewed each year. The costs of the accreditations plus the inspection and certification costs incurred by the certifying body have to be paid by the operator through the certification fees. The result is a higher price of the certified organic products. This is why, until now, in Bolivia organic third party certification is exclusively carried out for products that are destined to export markets where they can be sold for higher prices and have the advantage of an existing and differentiated organic market.

Unfortunately there is no official data source about the number of organic operators, the area planted with organic crops and the quantity of production and exports until now. The only source of such information are the certifying bodies working in Bolivia (Imo Control, Biolatina, Bolicert, Ceres, IBD, Ecocert, Skal, OCIA, QAI, ECO Gress)²⁸. The author tried to collect this data with a pdf-form (Annex VII) sent and given personally to the three major

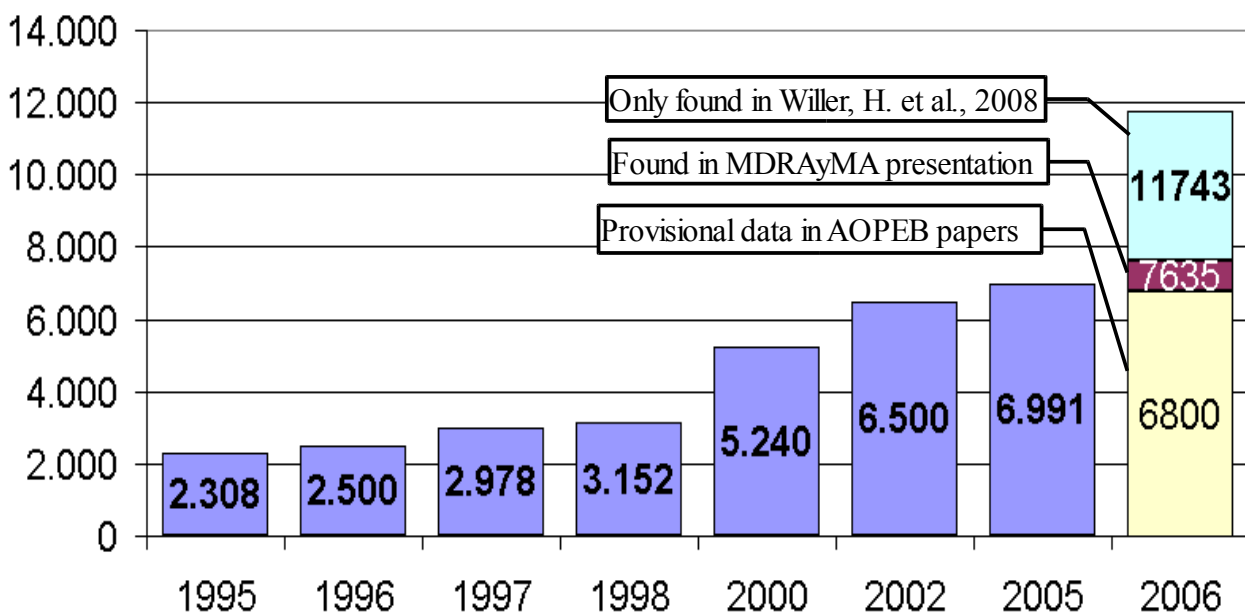
contd. from p. 27 , *ABI*, 20.06.08, *El Diario*, 14.06.08

27 These statements are based on information about agrochemicals in Bolivia on the website of PLAGBOL (<http://plagbol.org.bo/>). Also two articles of La Razón newspaper give an impression of the situation. *La Razón*, 06.08.07, *La Razón*, 16.03.08

28 Because until now certifying bodies in Bolivia did not have to register their activity it is not easy to tell which ones are active in Bolivia. The list is taken out of an e-mail communication with Grover Bustillos of Bolicert and *MDRAyMA*, 2007b. It is not conclusive. As soon as the national control system works a complete list should be available from the SENASAG.

certifying bodies, namely Imo Control, Biolatina and Bolicert but until now has only received data from Bolicert. The only available dataset was collected by AOPEB using the same method (collecting data from the certifiers). This data appears in different AOPEB papers, websites²⁹ and presentations and is also quoted in some papers of the MDRAyMA (MDRAyMA, 2007b), most of which are neither dated nor clearly attributable to an individual author. It was also used in the compilation of the 2008 report on organic agriculture worldwide (Willer, H. et al., 2008) by IFOAM and FiBL. It seems that the data was collected in 2006 by AOPEB. Although this data set might not include data of all international certifiers active in Bolivia³⁰ and some values seem to be interpolated it can be considered an approximation of the real situation and is the only one available at the moment. The data about the value of the exports seems to come from a report of CAINCO and apparently also includes non organic grapes and quinoa³¹ and thus has to be taken as not very reliable. Below the data of that data set is critically shown in Figure 9, Figure 10, Figure 11 and Figure 12.

Figure 9: Number of certified organic farms 1995 – 2006



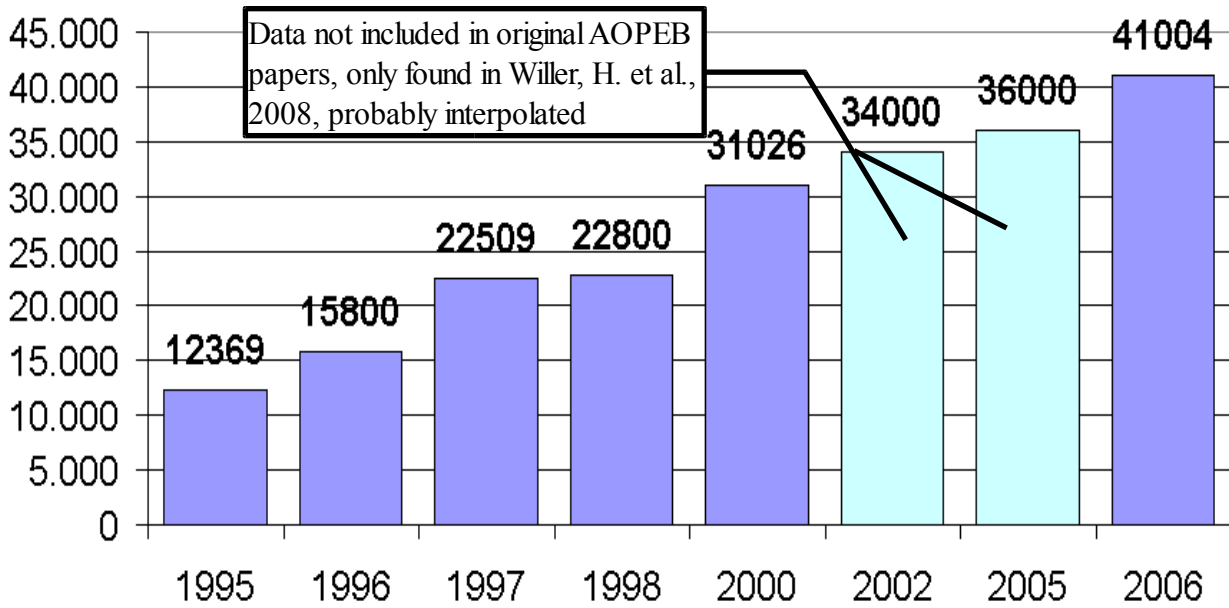
Source: adapted from AOPEB unpublished data, Willer, H. et al., 2008

29 On the AOPEB website: <http://www.aopeb.org/descargas.php>

30 To the authors knowledge it includes data of the the main certifiers Imo Control, Biolatina and Bolicert

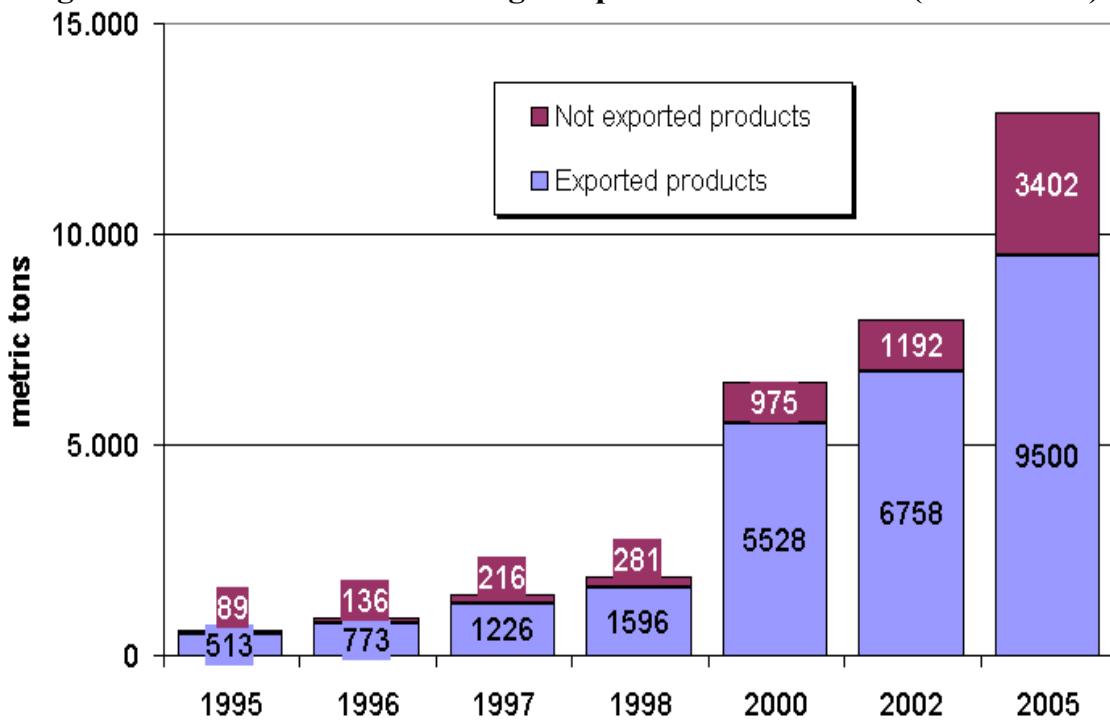
31 Proyecto Visión País: Estrategias Departamentales de Competitividad y Visión País, ASDI, PDEB, CAINCO, CLACDS

Figure 10: Organically certified area (ha) 1995 - 2006 without brazil nut wild collection area



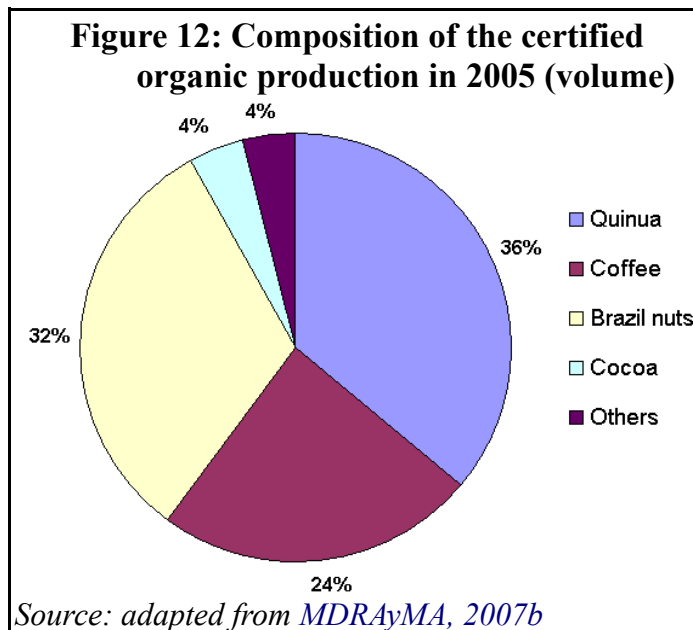
Source: adapted from AOPEB unpublished data, Willer, H. et al., 2008

Figure 11: Volume of certified organic products 1995 - 2005 (metric tons)



Source: adapted from AOPEB unpublished data, Willer, H. et al., 2008

The main certified and exported crops in Bolivia today are quinoa (21.4% - 32.1% of the total production is certified organic), coffee (13,2% of the total production is certified organic), brazil nuts³² (*Bertholletia excelsa*) (11,4% of the total production is certified organic)³³, cocoa, amaranth and beans. Furthermore, tropical fruit, herbs and teas, sugar cane, soybeans, sesame seeds and honey are certified for export (AOPEB unpublished, Willer, H. et al., 2008). Figure 12 shows the crop composition of certified organic production in 2002. The certified organic brazil nuts are collected in the wild on an area of 1.028.556 ha in the lowland jungles.



5 Law 3525/06

The area of ecological production has been regulated legally in Bolivia since the end of 2006 through one law ([Republica de Bolivia, 3525/2006](#)), a ministerial resolution ([MDRAyMA, 280/2006](#)) and one administrative resolution ([SENASAG, 217/2006](#))³⁴.

On November 21st, 2006 **law 3525** became effective in Bolivia. This law encompasses the *regulation and promotion of the ecological agriculture and NTFP (Non-Timber Forest Product) production*. The law was followed on the 4th of December, 2006 by the **ministerial resolution 280/2006** of the MDRAyMA containing the regulation of the *national technical norms for ecological production*. Ultimately the on December 6th of 2006 the **administrative resolution 217/2006** was passed by the SENASAG, containing the regulation on the *national system for the control of ecological production*. These legislative and administrative steps were the result of a process that took more than ten years to complete and which is described below.

³² Bolivia is also the single biggest producer of brazil nuts with a share of 53% of the world market (2002)

³³ Source of the percentages: [MDRAyMA, 2007b](#)

³⁴ These documents are also the basis of this chapter and source of information where not quoted otherwise. They all can be accessed at the AOPEB website: <http://www.aopeb.org/descargas.php>

5.1 *Development of ecological legislation in Bolivia*

The following time line is compiled mainly from a time line given on the [AOPEB website](#) with additional data from personal interviews with Daniel Vildoza and Jochen Neuendorff:

1990: The export of products to fair trade and ecological markets in the north starts with products like coffee, quinoa, cocoa and brazil nuts, which require certification under international norms.

1991: 24.09. AOPEB is founded by producer organisations and NGOs as a support institution to help its members in the areas of production, certification and marketing.

1996: AOPEB looks for help from the German GTZ (German Technical Cooperation) and the consultants Franz Augsburger and Jochen Neuendorff compile the first draft of a legal framework for Bolivia (a mixture of IFOAM basic Standards and EEC 2092/91). Also the FAO Project TCP/RLA/3006³⁵, which is also active in other countries, helped in the whole process.

1998: AOPEB promotes agreements with the Agricultural and Development ministries (which are renewed in 2002 and 2004 indefinitely) which result in the formation of the *Comisión de Coordinación Técnica* (CCT) a committee of private and public entities (MACA, MDS, CEPROBOL, SENASAG, UMSA, UAC-CP, AOPEB, FECAFEB) that works on proposals for politics and norms to strengthen and support ecological production in Bolivia.

1996: Due to requirements of the international norms AOPEB promotes the creation of the Bolivian certifying body [BOLICERT](#) which is now accredited under ISO Guide 65 (EN 45011) on different international markets.

1998: Commission for revision of the first draft for the legal framework.

2000: 20.01. the AOPEB norm for ecological production is approved and recognized by the *Resolución Ministerial 005/2000* which approves it as the legal norm for ecological production in Bolivia. IBNORCA (Instituto Boliviano de Normalización y Calidad) includes it as norm NB 907-00 in its catalogue which theoretically makes it an obligatory requirement for producers and processors who want to market their products with ecological claims in Bolivia.

³⁵ [FAO, 2006c](#) Apoyo al desarrollo de la agricultura orgánica y fortalecimiento institucional de la certificación orgánica (help in the development of organic agriculture and institutional strengthening of organic certification)

AOBEP starts its five year plan trying to involve public and private actors in a *Movimiento Agroecológico en Bolivia* (MAEB – Agroecological Movement in Bolivia), using farmer-to-farmer-, management- and organizing workshops including modern information technologies and also focusing on raising awareness among the general public participating in national and international fairs and strengthening interinstitutional relationships.

2003: synchronisation of the drafts with the European regulation 2091/91, discussion and presentation of the project “*regulation and promotion of ecological agriculture and NTFP production*” to the legislative powers.

2005: 22.12: Within the framework of the CCT, *Decreto Supremo 28558* is passed with the objective to promote the ecological production on the national level and implement, the national control system for ecological production. The SENASAG is designated the national competent authority for the control of ecological production.

2006: January: Within the framework of the CCT through *Resolución Ministerial 017/2006*, the *Política de Desarrollo de la Producción Ecológica en Bolivia* (Policy of development of the ecological production in Bolivia) is passed.

June: The Government presents its national development plan 2006 – 2010: “*dignified, sovereign, productive and democratic Bolivia, to live well*”³⁶ in which it acknowledges the importance of promoting ecological agriculture on a national level especially in chapter 5.4.1 on pages 131, 135 and 137.

19.10. and 15.11. First the parliament and then the senate pass the “*law for regulation and promotion of ecological agriculture and non-timber forest products production*”.

21.11. In a public act the President of Bolivia, Evo Morales Ayma, proclaims the “*law 3525 for regulation and promotion of ecological agriculture and NTFP production with the objective to prepare the path for an ecological Bolivia*”.

04.12. Within the framework of the application of law 3525 the “*national technical norm for ecological production*” is passed through the *resolución ministerial 280/2006* of the MDRAyMA ([MDRAyMA, 280/2006](#))

36 Republica de Bolivia, 2006

06.12. Within the framework of the application of law 3525 the “*regulation of the national system for the control of ecological production*” is passed through the *resolución administrativa 217/2006* of the SENASAG ([SENASAG, 217/2006](#))

All the documents are sent to the European Union with an official request to be included into the list of third countries according to EEC2092/91.

5.2 **Contents of law 3525/06**

In this chapter the major and most important contents of *law 3525/06*, the *national technical norm* and the *national system for the control of ecological production* will be presented in a brief summary.

Law 3525/06 has 7 chapters:

- 1. Objective and scope of the law:** The objective is to regulate, promote and strengthen ecological production, to fight against hunger and for healthy food that is accessible to all. The processes involved should not have a negative effect on the environment. Therefore in the whole production chain the application of all types of synthetic inputs as well as genetically modified organisms (GMOs) are not allowed and all the processes should respond to *technical norms* and be certified by specialized entities which are recognized by the *national competent authority* (NCA). The law is aimed at all agricultural processed and unprocessed products which are classified as ecological, as well as NTFPs and food products whose main ingredients are ecological. It also applies to inputs for ecological production like seeds, feeds and fertilizers.
- 2. Food sovereignty:** The ecological sector has the responsibility of contributing to the goals of food sovereignty and food security. The law should not interfere with international conventions on human rights and rights of indigenous communities, and the future agreements should be compatible with the objectives of the law.
- 3. Institutional framework:** A *national council for ecological production* (CNAPE) will be created as the operational instance under the MDRAyMA and will be responsible to plan, promote, norm and help in the establishment of programs and projects as well as policies for the ecological sector. This council will be composed of members of the private sector, producers organisations and the public sector according to the following list: 1) MDRAyMA, 2) Ministerio de Planificación del Desarrollo, 3)

Ministerio de Producción y Microempresa, 4) Ministerio de Relaciones Exteriores y Cultos, 5) public universities, 6) three representatives of AOPEB (one for the ecological producers organisations, one for the NTFP producers and one of the directorate), 7) the farmers union (CSUTCB), 8) the national agricultural confederation (CONFEAGRO), 9) the national colonizer's confederation and 10) the national exporters chamber. In special cases other institutions have to join, always observing an equal number of votes for private and public sector. The CNAPE has a coordinating unit which is responsible for the execution of the mandate of the CNAPE and is elected by the directorate.

4. Structure of the national system for control: The control system should be transparent, protect the consumers and create equal conditions for those who participate in the ecological market. Therefore the CNAPE will propose *technical norms* which regulate the production, storage, transport, processing, allowed inputs, packaging, labeling, certification, use of the national logo, trade, export and import of ecological products. These norms will be approved by the MDRAyMA. The executive authority of the national control system will be the SENASAG (national competent authority). The SENASAG has the tasks to authorize and register certifiers and operators, control the compliance with the norms, apply sanctions, keep up-to-date lists of allowed inputs, resolve conflicts between certifiers and operators, control national and international trade and promote agreements of equivalence of the national control system with other governments to facilitate trade of ecological products. The regulation of procedures of the national control system will be approved by the SENASAG.

5. The national logo for ecological products:

The national logo (Figure 13) should identify and guarantee ecological products. The CNAPE defines the conditions for the use of the logo according to the regulation. All properly certified products should use the logo.

6. About the certification: The national control system recognizes two different sorts of certifications for ecological products.



- 1) For international trade and exports the certification has to be carried out by certifying bodies that are accredited under ISO guide 65 (or EN 45011).
- 2) For the national and local market the certification can be carried out by alternative control systems which have to be evaluated, approved and controlled by the SENASAG.

7. Promotion and incentives: The Departamentos and Provincias incorporate into their development plans agro-ecological projects and prioritize them when they are proposed by other development organizations. The public education system incorporates contents about the benefits of ecological agriculture into the curricula. The CNAPE in coordination with other public and private entities works out a *strategic national plan for promotion of ecological agriculture* and creates and strengthens centers of ecological research. Institutions which are publicly funded prioritize ecological products.

Furthermore, all previous and contrary laws and decrees (especially *Decreto Supremo No. 28559* from 2005) are declared invalid.

The **national technical norm** was prepared by a commission conformed by experts of the public³⁷ and private³⁸ sector using and combining the norm of *Resolución Ministerial 005/2000*, the *AOPEB norm* (2002), the *IFOAM basic standards*, the *EEC2092/91* and should also be equivalent to the *Codex Alimentarius guidelines GL32-1999*. It is valid for all products in national and international trade which bear the denominations *orgánico*, *ecológico*, *biológico* and derivatives which make reference to ecological production methods. In the following the norm is summarized in a way that main aspects and rules are listed which are more specific and relevant to Bolivia³⁹:

Article 1 apart from a production, following ecological cycles and the respect for the environment asks for respect for forms of communitarian organisation and indigenous cultures and it is stated that the norm does not accept contract systems where the land is only cultivated for commercial purposes. Furthermore, the norm should contribute to fair national and international trade relationships.

Article 5 mentions that burning and the use of heavy machinery should be limited to a minimum and in the Amazon and Chaco areas fields should be divided by wind-

37 MDRAyMA, MREC, MPM, MPD, SENASAG

38 AOPEB, FECAFEB, ANAPQUI, El Ceibo, IMO Control, Biolatina

39 Please refer to the original text of the norm ([MDRAyMA, 280/2006](#)) for details.

breaks. It is also required to diversify the ecosystem and to have at least 10% of the farm area covered with perennial wild or cultivated plants and it is forbidden to use contaminated or used water for irrigation. The burning of non biodegradable materials is also not allowed on farms and their usage is restricted to a minimum.

Article 8 talks about conversion periods and it is interesting to find that the conversion period from *traditional agriculture*⁴⁰ is only 12 months. Also land that was not cultivated for more than 24 months and wild collection do not require a conversion period. On the other hand, land where GMOs were used has to go through a minimum 60 months of conversion period.

Articles 9 and 10 define and regulate the *wild collection*. For this system it is necessary to have a management plan which states the area, the number of plants, the collection frequency and quantity and the regrowth of the collected species among other data.

Article 11 states that local, adapted and especially traditional varieties should be used to preserve genetic resources and diversity. It is also obligatory to cultivate tropical perennial crops like coffee and cocoa which are tolerant to shade in agroforestry or multi-strata systems.

Article 13 specifies the conditions of burning. Systematic and frequent burning is forbidden and burning can only be carried out in small areas and not annually. The operators have to actively search for alternative production systems that avoid burning.

Article 14 is about soil management and specifically declares that *traditional* rotation and soil protection conforms with the norm. It also restricts slash and burn practices in secondary forests and forbids it completely in primary forests. Furthermore, in forested areas a buffer zone of 10 to 50 meters of forest has to be left at the sides of streams. The excessive use of water for irrigation is also forbidden.

Article 15 about fertilization explicitly forbids the use of human faeces and urine.

Article 19 states that also wool can be sold as ecological if the animal has been managed according to the norm for 12 (camelids) or 6 (sheep) months.

Article 21 states the prohibition to feed animals with animal excrements.

⁴⁰ Traditional agriculture as defined in article 2 where no techniques or inputs are used which are forbidden by the norm.

Article 22 about animal health states an exception for the use of synthetic-chemical treatments for ecto-parasites in regions with a strong pathogen presence.

Article 29 talks about the logo and labelling. The ecological products have to state all ingredients and additives as well as the origin of the product and the certification body and it is again stated that producers who label their products with ecological claims and are not certified will be sanctioned.

Article 32 asks the operator to keep ordered and chronological records which should always be presentable during all the phases of production.

Article 33 is about certification. All certifying bodies have to be authorized and registered by the SENASAG. The minimal requirements for the operators at an inspection are to have the *specific norm* for their production branch or crop, to have informed all farmers about the principles of organic farming (in case of an association) and the *specific norms* and to have a working *internal control system* (ICS) or quality guarantee system⁴¹ which are the basis for the certification.

Article 34 talks about the *specific norms* for different production branches and crops. Every operator can suggest a *specific norm* for his branch, which will be revised and approved by the CNAPE. These *specific norms* have to comply with the present general *technical norm*.

Article 35 is very interesting because it details, how the norm will be revised in the future. It will be revised and actualized every two years by the CNAPE or in extraordinary sessions after the request of any operator or certifying body. The AOPEB is the official coordinator of the norms and will help in the operative processes of revision and actualization. The revised norms will be available for public revision for 30 days after which it will be approved by a 2/3 vote by the CNAPE and officially passed on to the MDRAyMA for legalisation. The same procedure is followed with the *specific norms* and all changed norms have to be implemented by the operators and certifying bodies within a period of 12 months.

The regimentation of the national system for the control of ecological production⁴² devised by the SENASAG with help from the GTZ and the FAO details the tasks of the of

41 The ICS is used in the certification of groups or associations of farmers and a quality guarantee system would be the equivalent for a single operator mainly consisting in record keeping and fixed standard operation procedures. For further information on ICS see [Naturland, 2002](#)

42 Please refer to [SENASAG, 217/2006](#) for details.

the SENASAG as assigned in chapter 4 of law 3525/06. It lists the requirements and procedures to be followed by certifying bodies and operators to be registered, the sanctions in cases of non compliances, the data to be collected in SENASAGs database and the requirements for exports and imports of ecological products including the forms to be used.

5.3 Implications for the local market (alternative certification)

As laid out in the previous chapters there is the legal possibility to register alternative certification systems for the national and local market of ecological products explicitly stated in chapter 6 of law 3525/06 and described in article 18 of the *regimentation of the national system for the control of ecological production*⁴³. According to this article the requirements for such a system to be registered are the following:

- The system has to have a defined, documented structure, which is approved by a instance that is recognized by the government. This documentation includes a manual for standard procedures, a quality manual, a manual of sanctions in case of non compliances and a system to monitor and control the flow of ecological products through the production chain as well as a system to handle complaints and resolve conflicts. All this documentation has to be archived and verifiable.
- The system has to have written contracts with all of its participants.
- The system has to posses the capacity to inspect (documented inspection) and control all of the operators at least once a year through a basic and participatory control system that guaranties conformity with the norms. This can be either trough an ICS or another quality system.
- The system staff has to be competent and trained to carry out the different tasks.

If all of these conditions are fulfilled the system can apply to be registered by the SENASAG and after thorough revision and possible visits might be approved. The additional documents the system has to provide for registration are the same as for commercial certifying bodies except the accreditation by international agencies and the certified compliance to ISO guide 65.

At the end of article 18 it is stated that the SENASAG might approve a specific alternative system to be followed in the future for the national and local market.

43 ibid

5.4 Implementation

As the whole legislation was passed at the end of 2006, it was valid and enforceable from that moment on – in theory. The reality in Bolivia at that time was, that the whole infrastructure and personnel for the implementation was not existent at that moment, especially in the SENASAG which is the main actor in the implementation of the national control system. The SENASAG is now divided into 3 divisions (animal health, plant health and food safety) and the tasks to be carried out in the framework of the *national system for control of the ecological production* are related to all of them, thus it would be necessary to either create a new division or to have some other administrative arrangement to create a working group on that field.

In August 2007 the SENASAG assigned the *national representative for ecological production* Mrs. Rosario Melgarejo. She has been in charge from then on to build up the system by first contacting the already operating certifying bodies and asking them to register with the new national system. Most of the certifying bodies were very reluctant to voluntarily register and had not registered by the end of 2007 although there were talks and conferences. Mrs. Melgarejo then put a deadline (the 30.01.2008) and afterwards a little more pressure on the certifying bodies⁴⁴ and by the 22.06.2008 all were registered including the operators certified by these certification bodies⁴⁵. A current problem is that the CNAPE has not met in almost a year and still has to authorize the use of the logo and talk about its internal procedures and other important pending issues. Until now no attempts have been made to enforce the law by sanctioning producers and vendors of products that falsely make ecological claims on the national and local market.

5.5 Experts opinions (surveys and interviews)

Of the twelve experts that filled out the expert questionnaires on the law only two answered yes to the question if the SENASAG had enough resources to implement and manage the *national system for ecological production, processing and marketing*. The rest stated a lack of resources, especially trained human resources because of the high fluctuation rate of personnel at the SENASAG as can be seen in Table 1. Nonetheless six (50%) of the experts stated that the system would be fully implemented within one year. Two (17%) were even convinced it would be implemented within six month. The rest were not

44 Information from personal interviews with Mrs. Melgarejo on the 01.02.08 in Cochabamba and the 07.03.08 in La Paz

45 Information from e-mail contact with Grover Bustillos of Bolicert the 22.06.2008

so optimistic. Three (25%) said it would need two years and one (8%) mentioned three years as the period needed to implement the system.

The question as to which degree (on a scale from 0 to 10)⁴⁶ the SENASAG could control the local market once the system would be implemented was answered by the experts in the following way: The average mean value was 5,5 and the median was 6. Only one contestant gave a value of zero and the next lowest value was four. The highest value was eight, which was given twice.

Seven (58%) experts said that there were some problems with the law and it should be changed in some points. These points vary widely and can be seen in Table 2. The problem respondent 1 states, namely that the logo is of another organisation, is indeed problematic, because the logo is (except for the words on it) the same as the AOPEB logo, which might cause some confusions among consumers in the future.

Table 1: SENASAGs problems implementing the national control system according to experts opinions.

| | |
|----|--|
| 1 | The personal and the logistical resources are limited. |
| 2 | deficient financial resources for control functions There is no trained technical personal. Senasag is a public politicized entity and as such its personal is instable. |
| 3 | No importance is given to the topic. It is not of nacional interest. They are still in the process of learning. |
| 4 | There are no qualified human resources. lack of interest for ecological agriculture because it is small scale They are politicians. They don't have experience. They don't have the resources. |
| 6 | very young organisation little resources |
| 7 | lack of resources for the functioning of the control system non experienced personal no knowledge of ISO65 frequent change of persons |
| 10 | stuff instability lack of resources (money, personal, infrastructure, etc) lack of training |
| 12 | Rright now they are just in the implementation process There are only few professionals with experience |

Source: Own survey data (2008)

Table 2: Experts answers about what should be changed in the legislation.

| Respondent | What has to be changed in law 3525? |
|------------|---|
| 1 | The logo is of another organisation. |
| 2 | Include small producers into CNAPE, put more emphasis on selfsufficiency and biodiversity instead of exportation, include the viceministry of Biodiversity, Natural Resources and Environment |
| 5 | There is no socialisation, who promotes the law? There is a vacuum in this aspect. |
| 6 | Conversion Periods in threatened or red zones. |
| 8 | Participacion of certifiers in decision making committee, norms etc. |
| 10 | The constitution of the CNAPE is too difficult, the fiscalisation system is too complicated. |

Source: Own survey data (2008)

⁴⁶ The respondents had to assign a value of 0 to 10 with 0 meaning no control and 10 complete control.

The answers as to when the EU might include Bolivia in their list of third countries with an equivalent legislation to EEC2092/91, which would make exports to the EU much easier, was answered in the following way: Four (33%) thought Bolivia could be included within two years, another four (33%) stated a period of four years. The others mentioned periods of seven years (one respondent), ten years (one respondent) and more than ten years (two respondents).

6 The local market for organic products

When talking about the market for ecological products in Bolivia it is important to define the ecological product first. In other contexts an ecological product is defined only by its certification status according to a norm. Because there are almost no certified ecological products on the local Bolivian market this study includes producers and products which auto-declare themselves ecological.

6.1 *The stakeholders*

To analyze a market it is important to know who the stakeholders are. Below the main stakeholder groups are presented.

6.1.1 Producers and Processors

The producers and processors of ecological products in Bolivia can be divided into two main groups: the ones who export and the ones only operating on the national or local level. In the first group are only bigger enterprises like [Coronilla](#) and farmers associations with support from development projects like [El Ceibo](#). As all their ecological exports must be certified they know the certification and control systems and thus can easily comply with the new national law and also provide the local market with certified products. They produce a rather narrow range of products for the export market⁴⁷, and all of the export products are dry or processed. The smaller producers who sell their products only on a local or national level generally produce more fresh products, like vegetables, fruit and dairy products but also some tubers and grains. These producers can be classified into four categories:

1. There are the rural poor subsistence farmers who live in remote areas and are ecological by default because they use traditional and sustainable cultivation meth-

⁴⁷ Please refer to chapter [4.5](#) for the details.

ods. This group has marginal participation in the market due to the bad infrastructure and remoteness. The excess quantities for the market also vary from season to season. The poor framers living closer to cities, roads, extension services and other infrastructure in their majority have abandoned traditional ecological agriculture and heavily use and misuse agrochemicals ([La Razon, 06.08.07](#)).

- 2.** The second group consists of small farmers, cooperatives or communities which might be close to urban centers or roads and which have abandoned the use of chemicals and turned to apply ecological or traditional methods. The reasons for this can be either the presence of a development project promoting ecological agriculture and helping in the marketing or the severe health effects caused by the use of the agrochemicals as described in [La Razón, 16.03.08](#). There are numerous projects promoting ecological agriculture and informing about the risks of agrochemicals.⁴⁸ Examples for this group are ACSHA in Achocalla close to La Paz, APIM in Itapaya close to Cochabamba and AGROPLAN in Samaipata close to Santa Cruz⁴⁹.
- 3.** The third group are single small and medium farms with highly educated administration which have good quality management, innovative products and marketing strategies. A lot of these operations are owned or managed by foreigners, like [Finca La Vispera](#) in Samaipata.
- 4.** A fourth and last category are social, religious, tourism and educational projects which include ecological food production like the [Pairumani Model Farm](#), [El Poncho Ecocenter](#), [Planeta Luz](#) and the [SOS children's village](#) in Cochabamba.

The same categories apply to the processors. A lot of processed products bear references to ecological or natural qualities but only if the processors are also producers it is likely that these statements are true. Most of the small and intermediate processors think that if they do not use any chemicals in their process, the end product is ecological or natural. Often they also equate handicraft or artisanal production with a natural or ecological quality. They very rarely consider the ecological condition of their raw materials.

A lot of the producers and processors market their products directly on weekly fairs and markets. In all of the big cities there is a huge number of periodical and permanent mar-

48 For example: [CEIISA](#), [Agregol Andes](#) and [PLAGBOL](#)

49 A very good socio economic description of smallholders trying to comercialize their products is [Gemelli, M., 2003](#)

kets. The ecological products are most often sold on periodical markets in upper class neighborhoods like the feria franca de la Av. America in Cochabamba. There are also differentiated periodical markets being established where only ecological (not certified) products are being sold like the ECO Feria on Plaza Sucre in Cochabamba⁵⁰. Some producers also sell their ecological products to intermediaries and they end up undifferentiated in the popular markets.

The only official institution for the ecological producers is AOPEB which started off as an association of ecological producer's organizations but now also admits private enterprises as members. Most of the producers affiliated to AOPEB are big associations and enterprises that export their products⁵¹. That is why lobbying and information by AOPEB in the past was directed to support, facilitate and enable exports of ecological products. Also the whole efforts by AOPEB to establish national ecological legislation were mainly aimed to facilitate exports to the EU by being included into the European third country list. According to Mr. Vildoza of AOPEB this has changed since 2005 and now the focus lies more on the internal market and capacity building of farmers.

Conclusively it can be stated that the group of ecological producers is very heterogeneous and not all are represented by AOPEB.

6.1.2 Retailers

It is very difficult to define this group because there is no single retailer who only sells certified ecological products. Below retailers will be discussed which claim to sell ecological, natural and general health products.

AOPEB owns a chain of shops called *Super Ecológico*⁵² which are established in La Paz (four), Cochabamba, Santa Cruz, Sucre and Tarija. Willer, H. et al., 2008 states that in these shops only certified organic products are sold. The author's research and visits to the shops in Cochabamba and La Paz revealed that by far not all the products are certified or from AOPEB affiliates. The other major chain of shops is Irupana. It is a franchise system of the [Irupana Andean Organic Food Company](#) that started small selling coffee and bread on the local market and now has its major market in exporting ecological Andean

50 This market is supported and promoted by the NGO Agrecol Andes (<http://www.agrecolandes.org/>)

51 AOPEB's affiliate list contains 37 producers organisations, 10 private businesses and 8 NGOs. In a personal interview the 25.01.2008 in La Paz Daniel Vildoza of AOPEB said that the majority of producers (around 70%) affiliated to AOPEB are exporting.

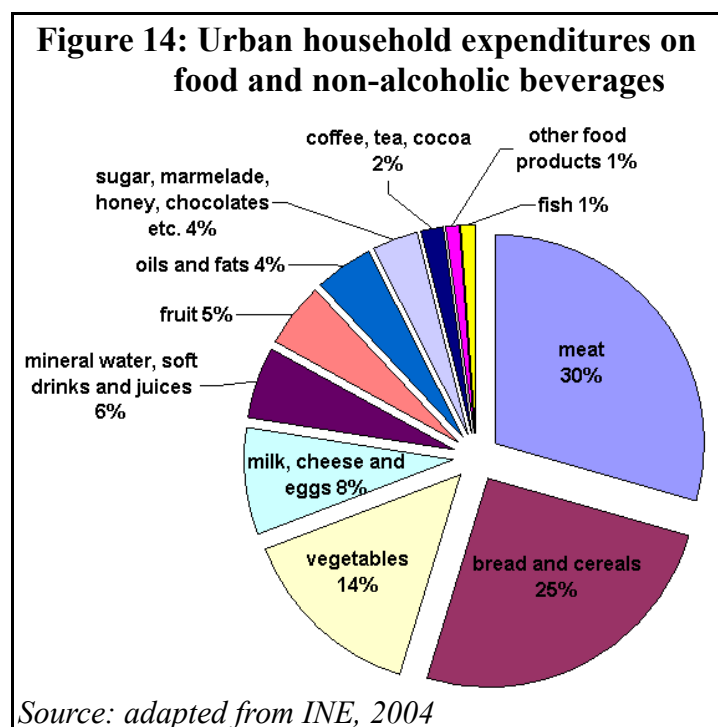
52 Unfortunately it was not possible to get an interview or informative e-mail contact with the manager of the Super Ecologicos, Mr. Hernán Vásquez so precise data is not available.

grains. The national franchises sell the 150 Irupana products and others that are approved by Irupana. This way the shops all have a similar design and range of quality products, some of which are certified. There are eleven shops in La Paz and others in Cochabamba, Santa Cruz and Oruro. Apart from these two chains, there is a number of individual shops that sell ecological, nature and health products. They often also buy the products from AOPEB affiliates or Irupana, but also have their own providers. The quality in these shops varies widely. There are some shops which are located in richer neighborhoods and offer only quality products from selected and controlled suppliers and others just use the nature, health and ecological argument to sell their conventional products. Some of the better ones are De Mi Tierra – Vivero Tiquipaya in Achumani, La Paz, Protal in Cochabamba and Naturalia in Santa Cruz. The typical product range can be seen on the website of [Eske-mas](http://www.eskemas.com)⁵³ shop in Cochabamba. Only very few shops sell fresh produce and most products are packaged and processed. The overwhelming majority of the products are tea, coffee, cereals, cocoa products, honey and herbal food supplements along with beauty and health products. In the big cities (La Paz, Santa Cruz and Cochabamba) there are also supermarkets present which cater to the upper class. On their shelves there can be found imported certified ecological products and some fresh products, mainly salads which bear ecological references. Most of these salads and other fresh products are often not ecological but cultivated using clean water and hygienic standards as opposed to the products in the open air markets.

6.1.3 Consumers

Generally urban Bolivians spend 23.95% of their income on food and non-alcoholic beverages and for the rural population this figure ascends to 39.32% (INE, 2004). The composition of the food expenditures for the urban population is depicted in Figure 14.

The ecological consumers are all Bolivians who buy or potentially would buy ecological products because they



53 The website is: <http://www.eskemas.web.bo/>

have a preference for them. The disposition to buy ecological products depends on four factors:

1. The first factor is the awareness of what constitutes an ecological product and the consequent shift in preference of ecological products over conventional products.
2. The second factor is the availability of ecological products. The consumer with preference for ecological products should find these easily in or close to her/his typically frequented shopping areas.
3. The third factor is the price. Even if the consumer has a preference for ecological products and they are available she/he will not buy them if they are too expensive for the food budget or compared to conventional products.
4. The fourth and last factor is the degree of trust the consumer has in the products ecological status. Her/his willingness to buy and pay a premium price depends on the certainty she/he has that the product is really ecological.

6.1.4 Certifiers

The certifiers operating in Bolivia (Imo Control, Biolatina, Bolicert, Ceres, IBD, Ecocert, Skal, OCIA, QAI, ECO Gress)⁵⁴ have no big interest in the national market because their main business is the certification of export goods. On the other hand they do have an interest in participating in the normative processes of the CNAPE because the legislation affects their business as it is mandatory for certifying bodies to register with the national system and they will be supervised by the SENASAG.

There are also at least two approaches to establish alternative control systems for the national and local market. One organization is the AOPEB which has designed a system where AOPEB inspectors / technicians inspect Internal Control Systems (ICS) which are set up in the member associations. This will enable the producers to use the national logo and also prepares them in case they choose to export by establishing a working ICS. AOPEB in this system acts very similar to a normal third party certifier who certifies an ICS. The other project to establish an alternative control system is the ECO Feria in Cochabamba. The group of producers and processors of this periodical market for ecologi-

54 Because until now certifying bodies in Bolivia did not have to register their activity it is not easy to tell which ones are active in Bolivia. The list is taken out of an e-mail communication with Grover Bustillos of Bolicert and [MDRAyMA, 2007b](#). It is not conclusive. As soon as the national control system works a complete list should be available from the SENASAG.

cal products along with institutional supporters is trying to build up a participatory guarantee system (PGS)⁵⁵ and register it with the SENASAG.

6.1.5 General public

In a democracy the general public is represented by the elected government and thus the governmental guidelines and plans should represent the general public's interests. As already quoted earlier in chapter 5, law 3525/06 talks about the promotion of ecological agriculture and preference that should be given for ecological products by public institutions. This means for example that the schools would have to prefer ecological products for the school lunches. Apart from the law the promotion of ecological agriculture is explicitly stated in the development plan of the government ([Republica de Bolivia, 2006](#)) in chapter 5.4.1 about agricultural development. On page 131 it figures as one of the top priorities in the structural transformation planned for the sector. Also the sectoral development plan that was published in 2007 by the MDRAyMA ([MDRAyMA, 2007a](#)) puts emphasis on ecological production, for example in point 2.2.1 on page 37 where it states it as an objective to strengthen and promote small-scale ecological agriculture for self consumption and local markets in areas with extreme poverty to assure food security. Also in chapter 2.2.2 under point D on page 40 the promotion of actions to convert small and medium farms towards ecological agriculture is mentioned. Also the yet to be approved new constitution explicitly mentions the support for ecological production especially in article 406 under point 3 ([Republica de Bolivia, 2007](#)).

Another public institution promoting and investigating ecological agriculture is [AGRUCO](#) (Agroecología Universidad Cochabamba) which has been working together with the Swiss development Agency COSUDE since 1985 on the topic and offers university courses and scientific publications.

Conclusively it can be stated that the general public represented by the government is in favor of ecological production and especially wants to promote it to smallholders with the vision to improve food security, self-sufficiency and local markets.

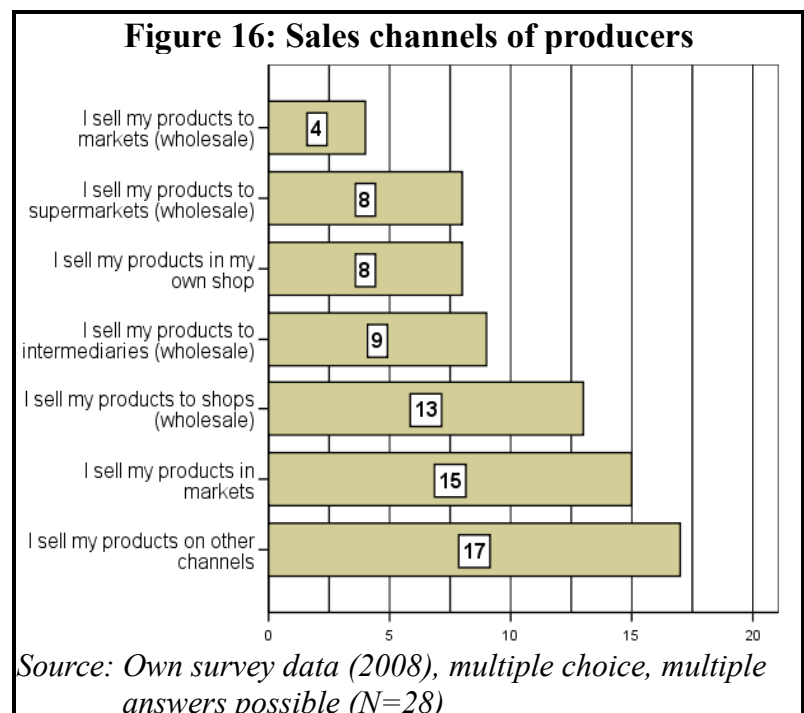
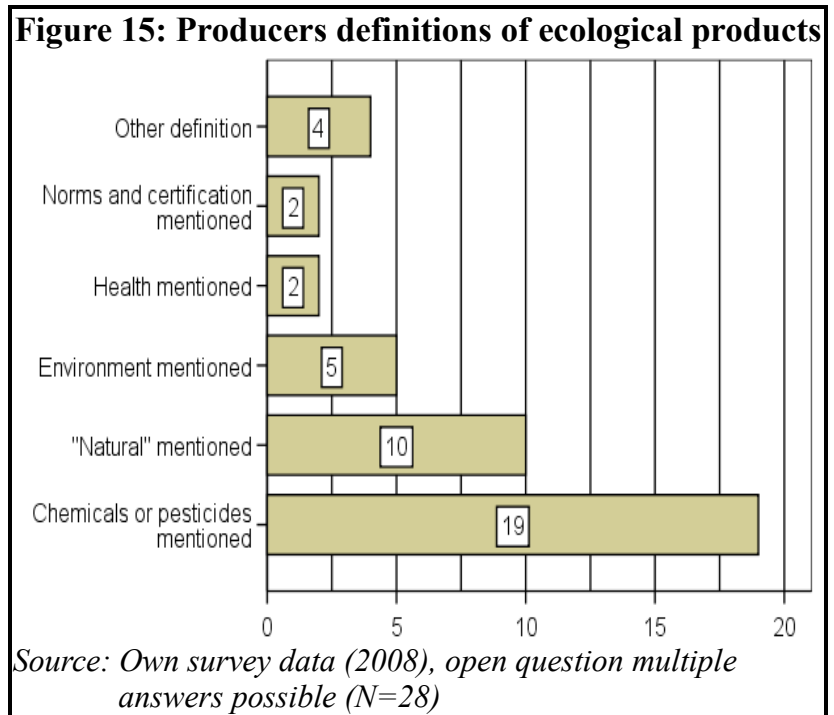
55 A PGS is a system where the producers visit and inspect each other and also some outside actors as NGOs, municipalities or churches take part in the approval and certification system. For more information visit the IFOAM website at: http://www.ifoam.org/about_ifoam/standards/pgs.html

6.2 Results of the surveys

The results of the market study presented below will give a further insight into the local market for ecological products although the study was not conducted to be representative. Chapter 3.2 details the methods and materials of data collection.

6.2.1 Producers

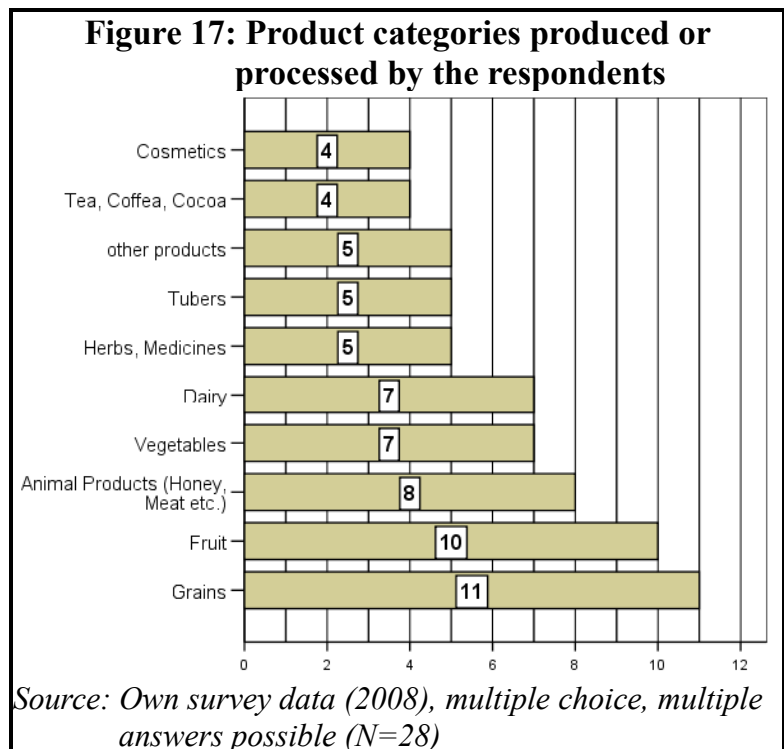
The question about what an ecological product is, was an open question and for the analysis five different categories were established as can be seen in Figure 15. Most of the 28 producers mentioned the use of chemicals or pesticides (19) as the difference to conventional agriculture. The second most common word mentioned was “natural” (10). The environment was only mentioned five times and health only twice just as norms and certification were mentioned twice. Four answers were very vague for example just mentioning a certain product. When asked if they thought that ecological and “natural” are the same, ten (36%) answered “Yes” and eighteen (64%) “No”. Of these eighteen ten made a clear statement that ecological products were of higher quality than “just” natural ones and 8 had no judgment in their answer about the difference between ecological and natural.



The question about the sales channels for their ecological products was answered as can be observed in Figure 16. The majority (17) use other channels than the ones in the questionnaires. These other channels are direct delivery (7), export markets (5), restaurants, institutions, franchises or distributors. Fifteen (54%) sell their products directly in the markets, while thirteen (46%) sell them to shops. Nine (32%) sell to intermediaries while eight (29%) respectively sell to supermarkets or in their own shops. Only 4 (14%) sell their products to wholesale markets. Fifty percent of the producers have three or less individual and independent sales channels while the average of the group lies at 4,4 sales channels and the highest number was fifteen.

Of twenty-four valid answers to the question if they also produce or process conventional products five (21%) said “Yes” and nineteen (79%) “No”.

The range and distribution of products produced or processed by the respondents can be observed in Figure 17⁵⁶. The most common category are grains (11) such as quinoa, amaranth or oats which are often processed into muesli or granola bars. The next category is fruit (10) which is often processed and sold in its dried form as snacks. Within the animal products (8) honey is a very common product as is *char-que*, a kind of dried llama jerky.



Fresh ecological meat or poultry was not sold by any respondent. The dairy (7) is mostly sold in a processed form as “*manjar*”, “*dulce de leche*”, cheese or yogurt. There is only one big producer of ecological fresh milk which is the [Pairumani model farm](#) in Cochabamba⁵⁷. Unfortunately the institutional policies of the model farm prohibit the expansion of the market beyond the boundaries of the *departamento* of Cochabamba. There are all kinds of

56 Due to the unrepresentative character of the survey the data about distribution of the products can be extremely biased.

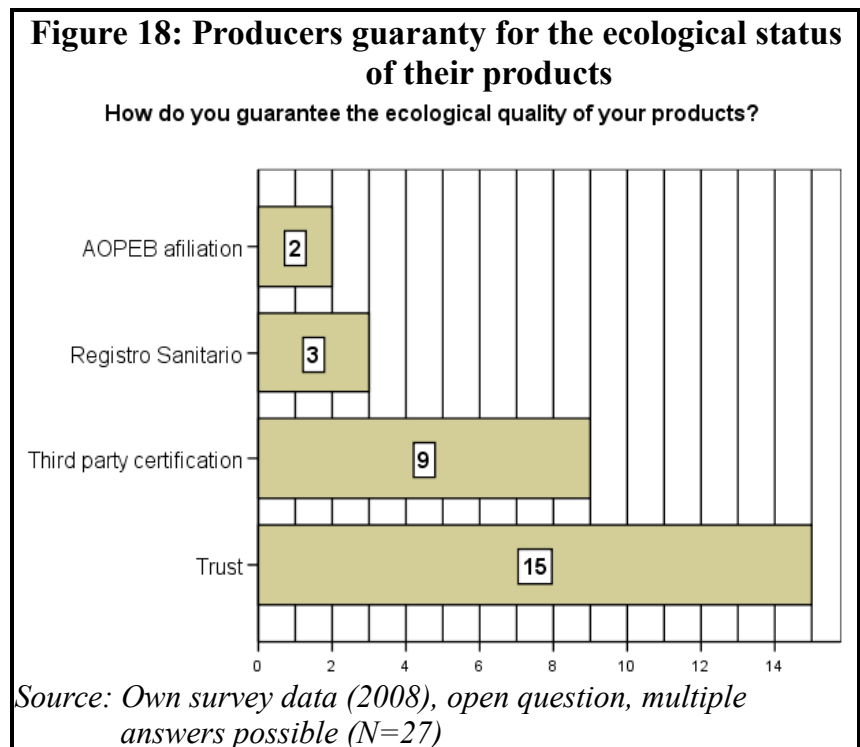
57 Professionally processed ecological dairy products are almost non existent in Latin America and as the director of the model farm Hugo Maldonado told in an interview conducted the 30.01.08 in Pairumani the only other ecological dairy that he knows of in Latin America is in Costa Rica.

different herbs and medicines (5) produced and processed and also the tubers mentioned are mostly not ordinary potatoes but maca (*lepidium meyenii*) which is consumed mostly in a dried up pulverized form for health reasons or yacón (*smallanthus sonchifolius*) which has a high natural sweetness and is consumed in sliced and dried form. Other products (5) include NTFPs and seeds. The ecological cosmetics (4) are often shampoos or soaps produced with aloe vera.

Interestingly, four (14%) of the respondents do not promote their product explicitly as ecological. Two of them generally delivered deficient data in the questionnaires and of the other ones Mr. Asano of Samaipata⁵⁸ does not use the name because he does not care for denominations and Mr. Rocha from Cochabamba calls his products “natural”.

The question about the price premium for their ecological products was only answered by twenty-four respondents in a precise way. Of these nineteen (76%) stated that they ask for a higher price for their ecological products and six (24%) said they sold their ecological products at the same price as conventional products.

Twenty-seven producers answered the question on how they guarantee the ecological quality of their products and their answers can be seen in Figure 18. Most of the producers (15) base their guaranty on a trust relationship with their clients. Nine quoted a third party certification, three thought their *Registro Sanitario* from the SENASAG would suffice and two quoted their AOPEB affiliation as a means of guarantee.



Asked whether they have clients who actually ask for some sort of guarantee, of a total of twenty-six who answered that question sixteen (62%) answered with “Yes” and ten (38%) with “No”. The follow-up question for those who an-

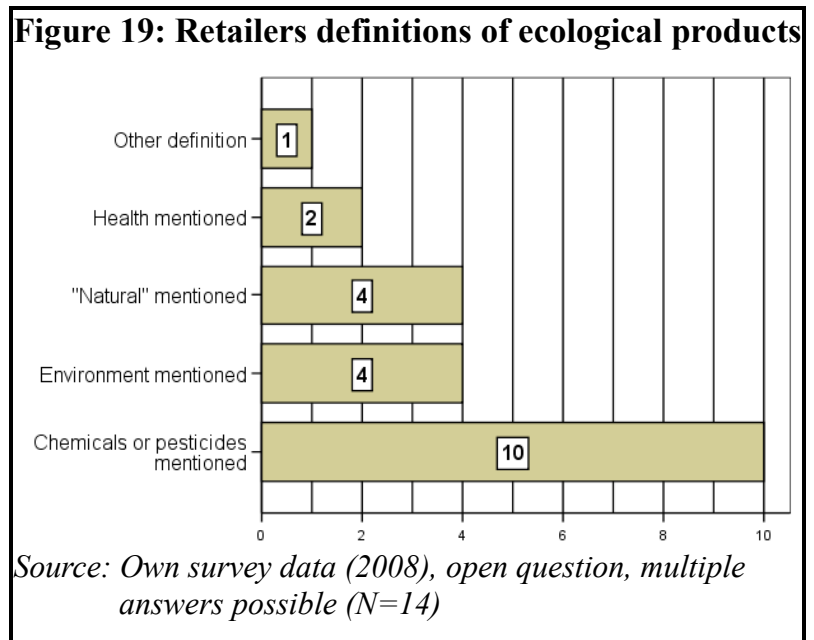
⁵⁸ Mr. Asano runs an exemplary horticulture farm using very innovative organic techniques. He rejects any labels for his “natural cycle” approach and his clients know the quality of his products, so that he even delivers to high class restaurants in La Paz. (Interview data, Samaipata 04.01.2008)

swered “Yes” was which percentage of their clients asked for some sort of guarantee. To this question the mean value was 55% and the median 50% with three producers quoting a 100% of clients who ask for a guarantee.

Asked if they had a certification for their ecological products of the twenty-six who answered this question twelve (46%) said “No” and fourteen (54%) said “Yes”. Of these fourteen seven (50%) have international certifications, three (21%) have AOPEB certification and four (29%) mentioned their *Registro Sanitario* certification.

6.2.2 Retailers

The question about what an ecological product is was answered as observed in Figure 19. Most of the fourteen retailers mentioned the use of chemicals or pesticides (10) as the difference to conventional products. The word “natural” and the environment each were mentioned four times, while health was mentioned twice and another definition was given once.



and another definition was given once. When asked if they thought that ecological and “natural” are the same, eight (57%) answered “Yes” and six (43%) “No”. Of these six, three made a clear statement that ecological products were of higher quality than “just” natural ones and one made the opposite statement. Two had no judgment in their answer about the difference between ecological and natural.

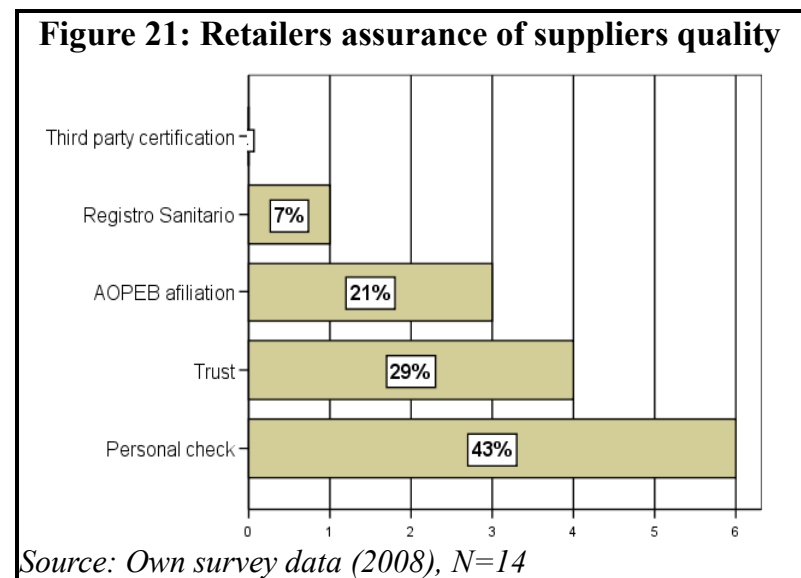
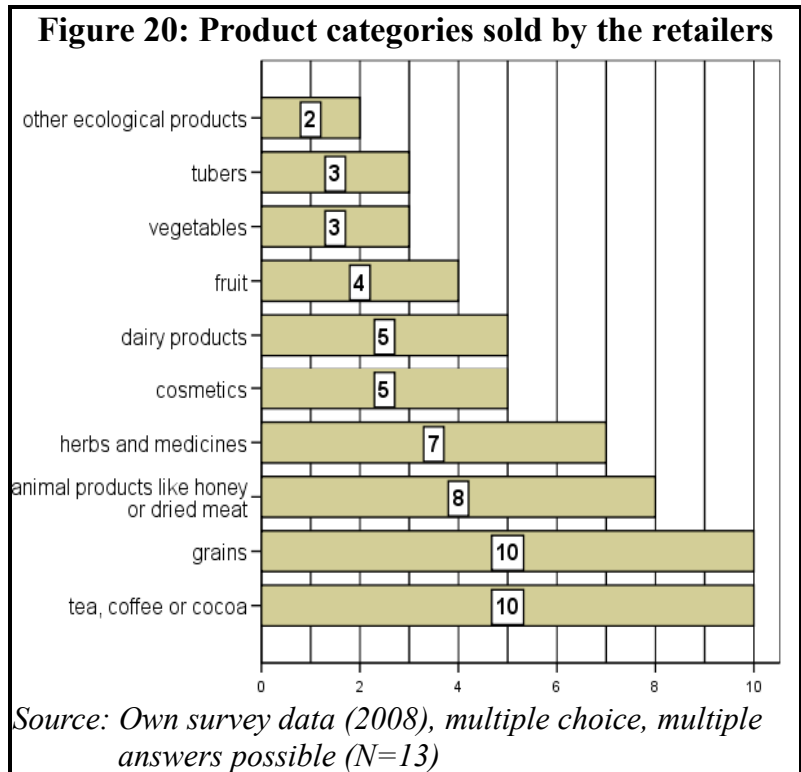
The range of products sold by the respondents can be observed in Figure 20. The characteristics of the products sold in the different categories are the same as discussed above in the producer section. The most common categories sold are grains, and tea, coffee and cocoa which were marked both ten times. The next category is animal products (8). The categories of herbs and medicines (7), cosmetics (6) and dairy products (6) follow. Fruit and vegetables are sold by four and three of the retailers respectively. Only three sell tubers and other products are not described individually but rather as “all other products”.

The question if also conventional products are sold in the shops was not answered by seven (50%), two (14%) answered “No” and five answered “Yes”. The range of conventional products sold in these five shops was quite similar to the ecological range.

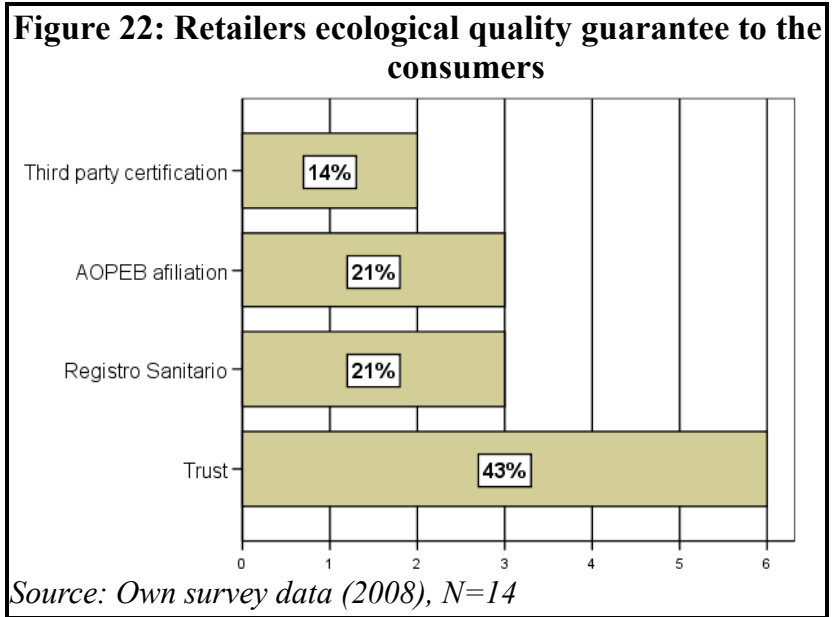
The next question about the percentage of turnover from the sales of ecological products was answered by ten respondents in a way that the mean was 73% and the median was at 89%. Three times it was stated that 100% came from the sale of ecological products.

Asked about the price premium for ecological products, only ten retailers gave an explicit answer out of which four (40%) said they sell ecological products for the same price as conventional products and the other six (60%) sell them for a higher price.

They all promote their products as ecological and when asked about how they check if their suppliers really provide ecological products they answered as seen in Figure 21. The primary method is a personal check of the producers which was mentioned by six (43%). The next most common method is simple trust used by four (29%) of the respondents. An AOPEB affiliation is a good prove for three (21%) and the *Registro Sanitario* serves as quality and ecological assurance for one (7%). No retailer checks for or insists on a third party certificate.

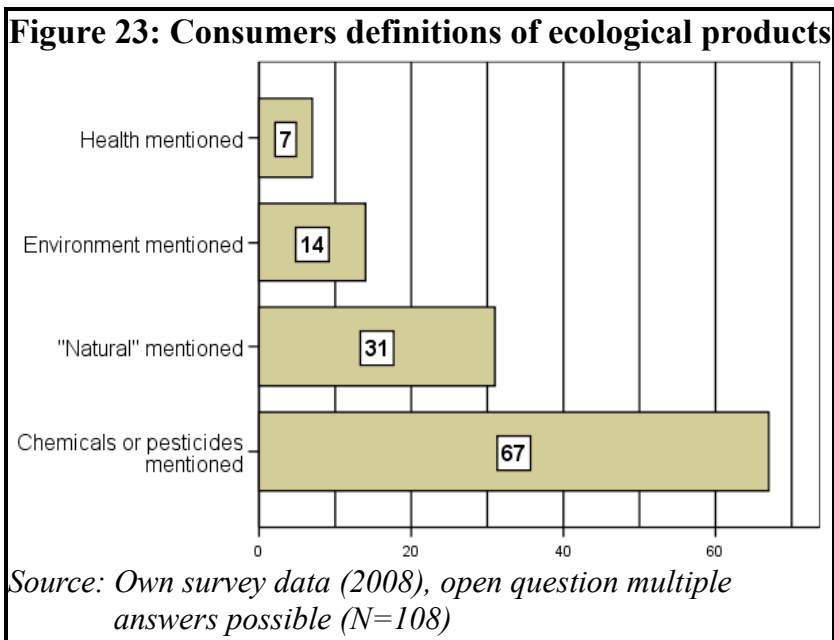


When asked in turn how they guarantee ecological quality to the consumers they answered as depicted in . Most of them (43%) expect the consumers to trust them. Three (21%) use the *Registro Sanitario*, another three (21%) the AOPEB affiliation and two (14%) sell products which are certified by a third party. The question if their clients were asking for guarantee was answered by thirteen and twelve (92%) answered “Yes”, while only one answered with “No”. The percentage of clients who ask for the product's origin and guarantee could be gathered only from seven of the retailers and the mean value for that question was 27%⁵⁹. On average the ten retailers who answered this question have 54 clients a day in their shops.



6.2.3 Consumers

Of the 139 consumers who answered the question if they knew the difference between ecological and conventional products, nineteen (14%) answered “No” and 119 (86%) answered with “Yes”. The following open question as to what the difference is, was answered by 108 persons and the results can be seen in Figure 23. Most of the respondents (67) mentioned chemicals and pesticides as the main difference between eco-

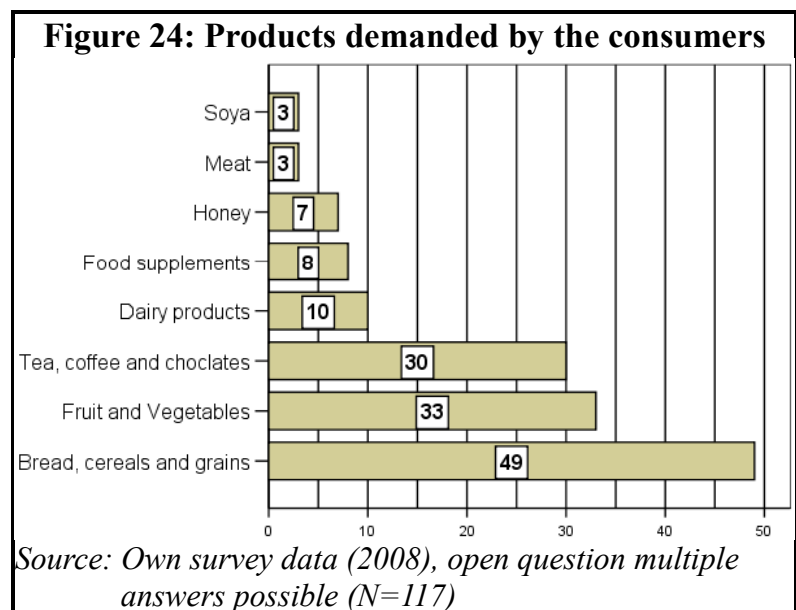


⁵⁹ With such a small sample this value is statistically not very significant but might give an idea.

logical and conventional products. The term *natural* was used thirty-three times and environment and health were mentioned fourteen and seven times respectively.

The next question whether they thought that ecological and *natural* are terms that describe the same concept was answered by 135 consumers. Of these 62 (46%) stated that the terms were equivalent while 73 (54%) disagreed. Of these 73 consumers 61 gave their opinion about the differences between ecological and *natural* in an open question. In these opinions 29 (48%) respondents favored the qualities of ecological products while 17 (28%) thought that a *natural* product is of higher purity and quality. Fifteen (24%) respondents gave no clear judgment in their statements.

The interest in the purchase of ecological products was asked in the next question and of the 136 consumers who answered this question only five explicitly stated that they had no interest in buying ecological products. In an open follow up question the others were asked to list the products they were interested in. The grouped results of the 117 answers to that question

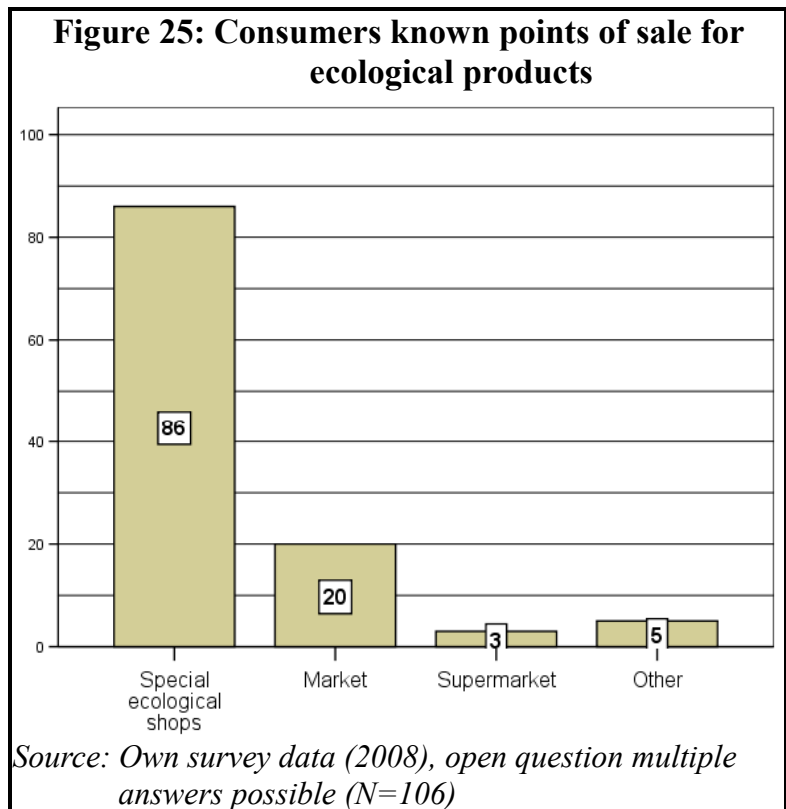


can be observed in Figure 24. Most answers (49) included cereals and grains and their products such as bread and other pastries. The second category of demand was fresh fruit and vegetables (33), followed by the “tea, coffee and chocolate” category (30). Other products such as dairy products (10), food supplements (9), honey (7) meat (3) and soya products (3) were mentioned with less frequency.

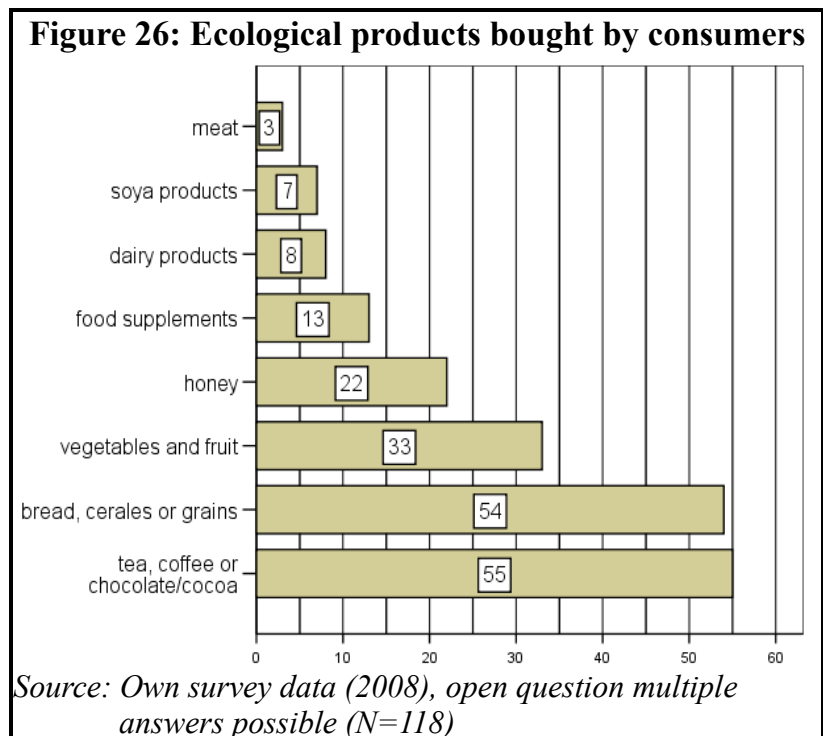
Asked if they knew where to buy ecological products, 29 (21%) of the 137 respondents said they did not know and the other 108 (79%) said they knew. The subsequent question where to buy ecological products was answered by 106 persons and the results are shown in Figure 25. Most respondents know special shops (86) which sell ecological products⁶⁰ and 20 mentioned markets. Supermarkets were only mentioned three times and other answers (5) were very unspecific.

⁶⁰ This is possibly a very biased answer as 41,6% of the surveys were conducted in special ecological shops.

The next block of questions was about the existing patterns of ecological consumption, first asking how frequently the consumers have bought ecological products. Of the 138 respondents only eight (6%) had never bought ecological products. Seventy-four (53%) had purchased ecological products a few times and 56 (41%) were frequent buyers. These frequent buyers are in their majority (55%) female, over 35 years old and live in a household with four persons.



The open follow up question about the range of ecological products bought was answered by 118 people and the results are shown in Figure 26. Most ecological consumers have bought dry and processed products like tea, coffee, chocolate (55), cereals, grains and bread (54). The next category are vegetables and fruit⁶¹ (33), followed by honey (22) and food supplements (13). Dairy products were only mentioned eight times⁶². The least mentioned categories were soya products (7) and meat (3)⁶³.



When asked about the way they assured themselves of the ecological quality when they bought ecological prod-

61 The fruit includes also the dehydrated fruit.

62 Of the eight only two referred to fresh milk and the others to cheese and other processed dairy products.

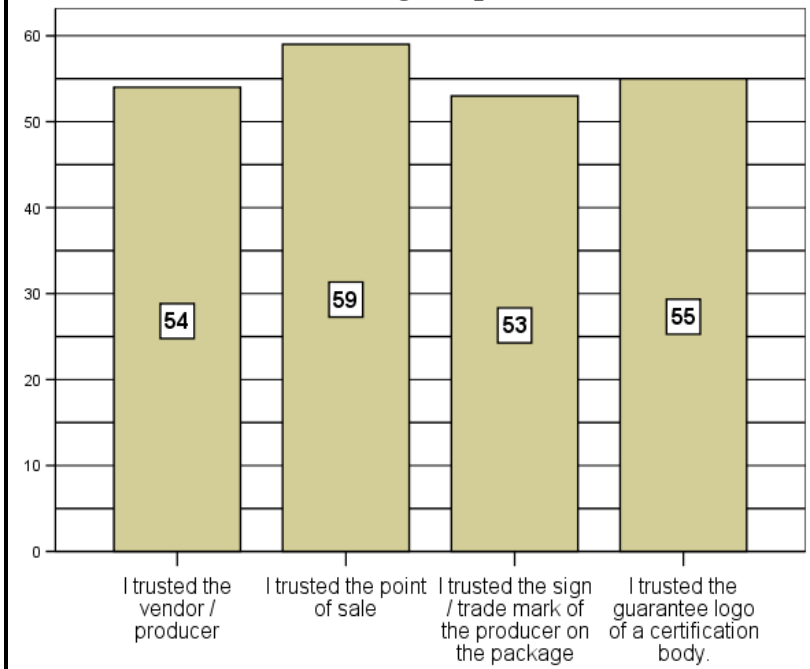
63 Only one respondent mentioned fresh meat while the two others were referring to dry llama jerky.

ucts the consumers answers where distributed quite equally between the four predefined categories as seen in Figure 27. Only the trust in the point of sale received a significantly higher value than the others.

The next question about the preferred way to guarantee ecological products had a much clearer result as can be seen in Figure 28. Most of the consumers (74) prefer to identify ecological products by the logo of a certification body

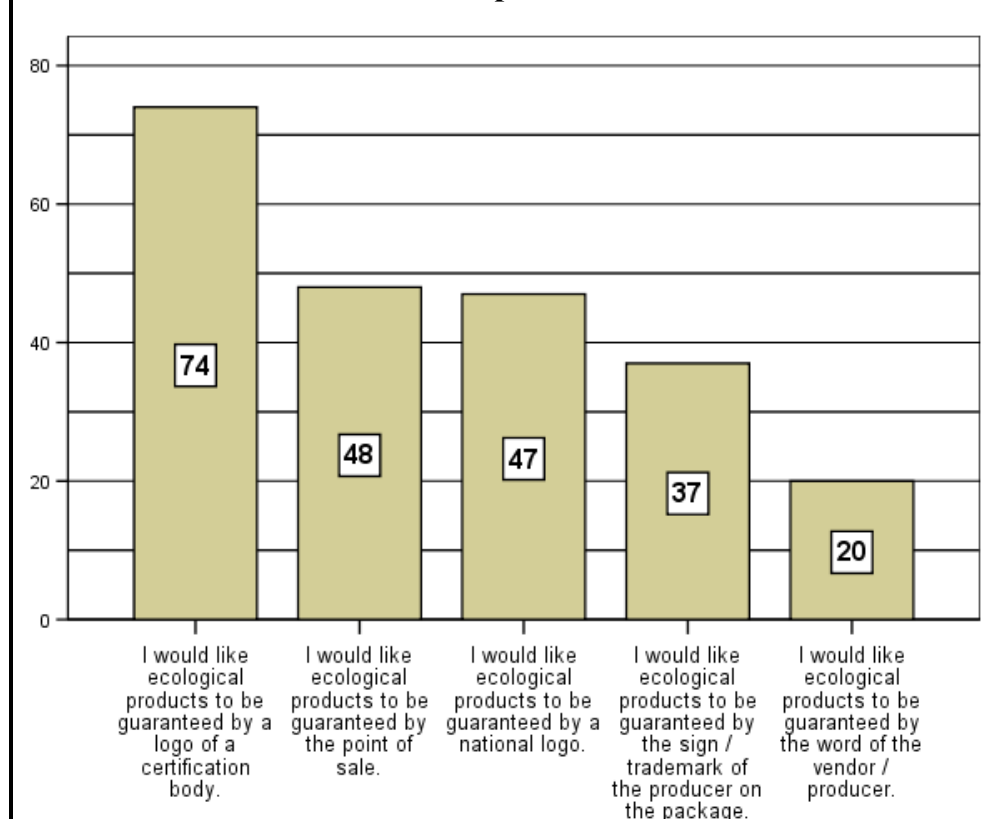
(third party certification). The next preferred options would be the trust in the point of sale (48) and a national logo and control system (47). Only thirty-seven consumers would trust the producers trademark or sign while even less (20) would be satisfied with just the word of the vendor / producer.

Figure 27: Consumers actual quality control for ecological products



Source: Own survey data (2008), multiple choice multiple answers possible (N=133)

Figure 28: Consumers preferred quality control for ecological products



Source: Own survey data (2008), multiple choice, multiple answers possible (N=134)

The next question was about the price premium the consumers would be willing to pay for a guaranteed ecological product. This question was answered by 130 respondents who on average would be willing to pay 10% more for the guaranteed ecological product. The distribution of the answers can be shown in Figure 29. Only sixteen (12%) would not pay a higher price. Only one respondent stated a willingness to pay up to forty percent more.

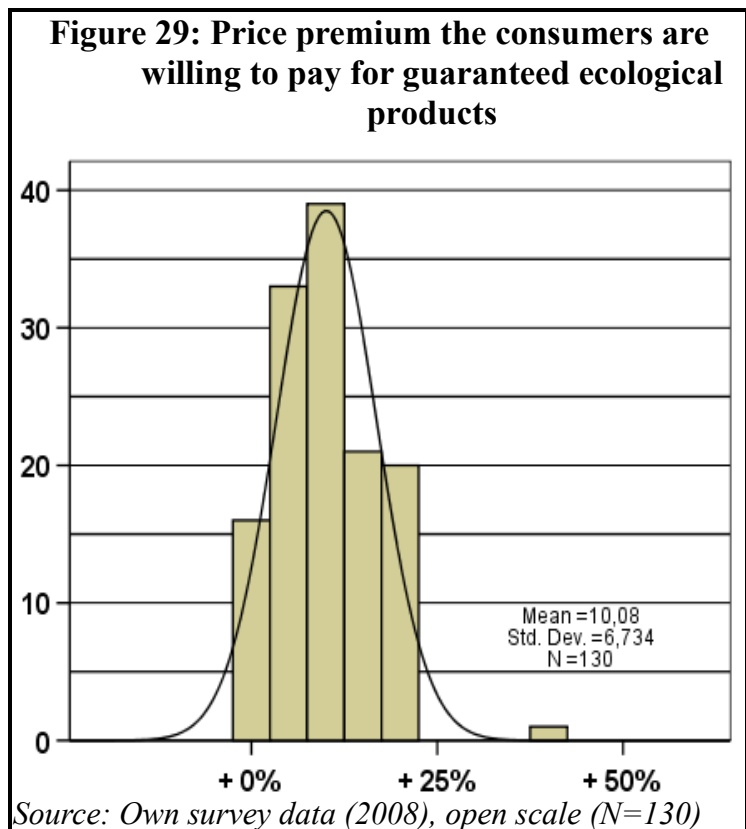
Of course the socio-economic background of the respondents had

an influence on their answers. For example the mean percentage for household-food-responsible persons was 11% and for not-food-responsible persons 9%. The age group of the 46 to 60 year old is prepared to pay the highest premium with 12%. Females on average are willing to pay 0,5% more than males. The average price premium of the twenty-one respondents with only secondary schooling was with 11.67%, higher than that of the university educated respondents with 10.05%.

The data on household food expenditures was too poor to be included into the analysis.

6.2.4 Experts

Asked about the percentage of economically active Bolivians who are conscious about the concept of ecological agriculture and products the mean of the experts answers was 23%. All the following questions referred to this group of conscious Bolivians.

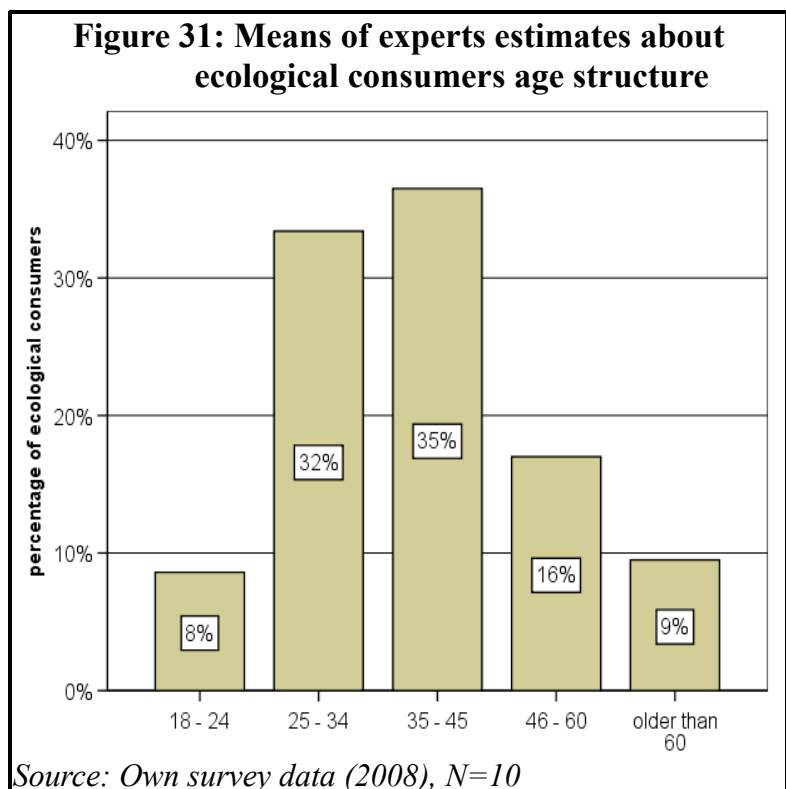
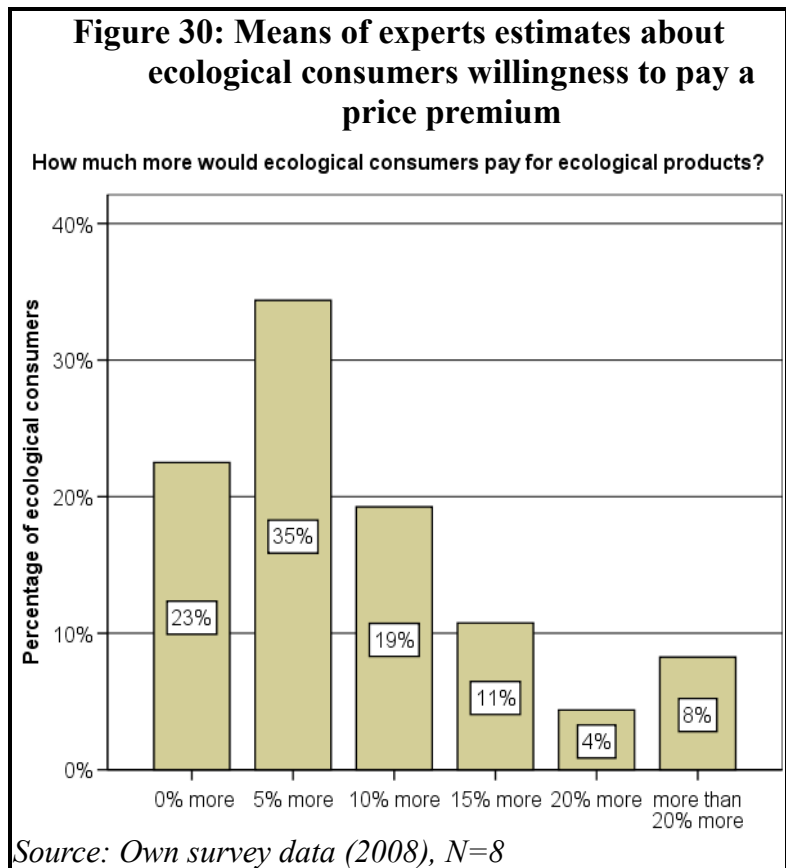


The share of conscious consumers who would actively search for ecological products was estimated by the experts to be at 31%⁶⁴. The expert's opinion about the distribution of the willingness to pay a price premium among the ecological consumers is depicted in Figure 30. According to these answers the average price premium would be around 9%⁶⁵ and only a little bit less than one quarter of the ecological consumers would be willing to pay more than 10% more.

The age group composition of the ecological consumer group was estimated as depicted in Figure 31 so the average age would be around 40 years.

The educational level of the ecological consumers was estimated to be 78% university, 18% secondary and 4% primary.

The economic situation of the ecological consumers was assessed by eight respondents in quite different ways, with half of them saying that mainly poor households below 200 Bs of food expenditures per month and per-



64 This would be 7.13% of the total population.

65 The exact number depends on the number that is assigned to the last category of "more than 20%". If calculating with 25% then the result is 8.1% and when using 50% the result jumps to 10.1%.

son would consume ecological food while the other half expects the majority of ecological consumers to spend more than 500 Bs per month and person on food⁶⁶.

The question about the preferred guaranty for ecological products was answered by the experts as shown in Figure 32. The point of sale is believed to inspire the most trust in the consumers, followed by the producer and the trust in the independent certifying body. The national label and a producer's label on the products are believed to be less effective communicating trust.

With a two year perspective the experts expect the national market to grow at a yearly rate of 10%. When assessing the five to ten year perspective the figure is 4.61% of market growth. Combining these figures the average expected market growth in the next ten years is around 7.31%.

The obstacles to a stronger market growth stated by the experts can be seen in Table 3. The main reason seems to be the lack of knowledge by producers and consumers due to insufficient or non-existent information on the topic.

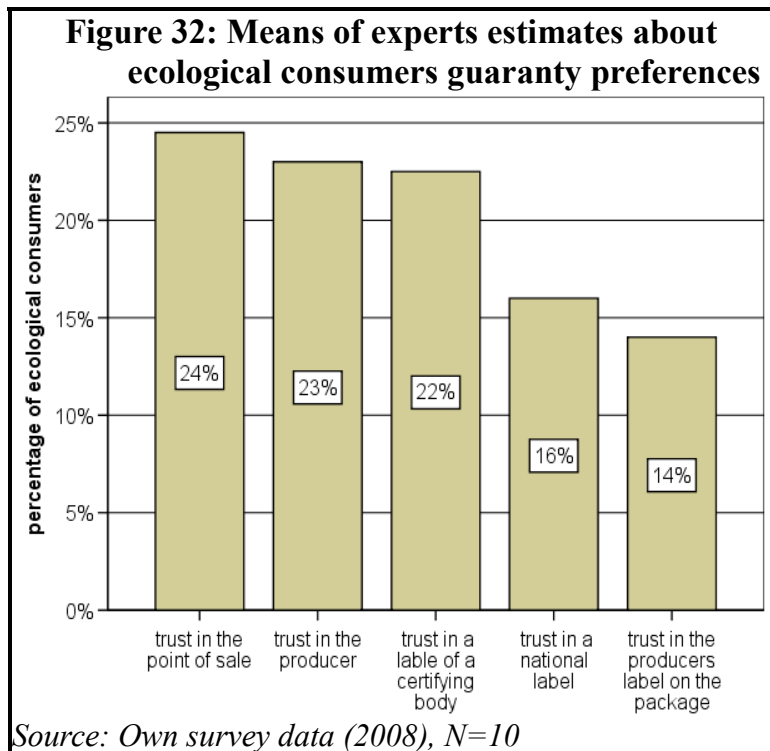
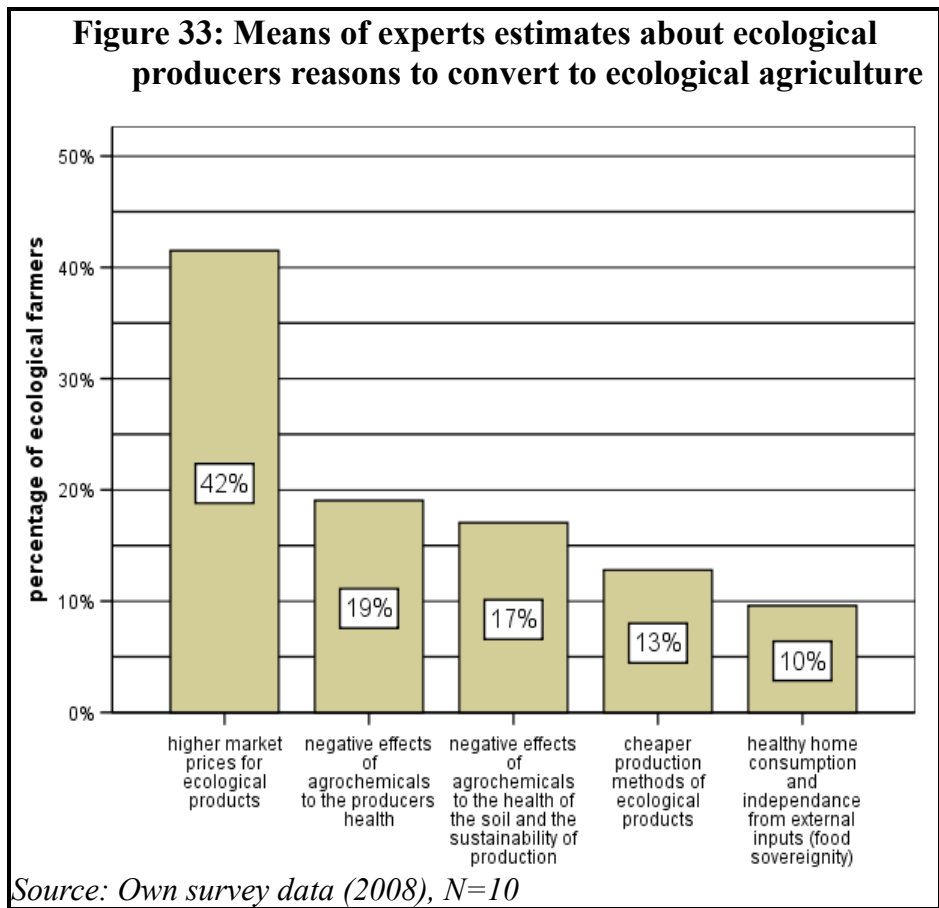


Table 3: Experts opinions on growth obstacles for the national ecological market

| | |
|----|---|
| 1 | - a lack of communication campaigns - there are not many ecological producers - growth of market for GMOs (soy milk) |
| 2 | - knowledge of consumers - trust in the quality - price |
| 3 | - deficient implementation of the law - deficient consumer education - no education / workshops for producers |
| 4 | - only a few farmers are conscious - lack of sensitisation of the society - help of the state in its different development offices to promote ecological agriculture |
| 5 | - education about ecological agriculture - knowledge and benefits |
| 6 | - lack of knowledge about the benefits - higher costs - lack of information |
| 8 | - lack of consciousness - price - sales |
| 10 | - indifference of producers and consumers - poverty - education |
| 11 | - little information on the topic on a national level - higher prices for the products - no differentiation |
| 13 | - little effort of public and private entities to teach the consumers about the advantage of ecological products - a lack of diversity and continuity of the different points of sale for ecological products - little help to producers and companies and no real incentives for ecological production |

⁶⁶ This discrepancy might be due to a misunderstanding of the experts also counting the poor traditional subsistence farmers as ecological consumers.

Asked about the producer's reasons to convert to ecological production methods, the experts opinions are reflected in Figure 33. The majority is believed by the experts to convert because of economic, market driven reasons (42%). The second reason would be adverse effects of agrochemicals to the producer's health (19%), followed by adverse effects on the



environment and sustainability of production (17%). Cheaper ecological production methods (13%) do not have a big influence on conversion as is the case with reasons of food sovereignty and healthy home consumption (10%). As other possible reasons economic incentives by the government or NGOs, market access and education were stated.

The last question about the level of understanding of ecological rules and legislation and in the different producer groups was answered by eight experts. The highest level of understanding was assigned to the big individual farmers (50)⁶⁷ almost equal to that of farmers associations (48). The small individual farmers are believed by the experts to have most difficulties in understanding the rules (32).

⁶⁷ The scale was 0 to 100 with 0 meaning total ignorance and disability to understand the rules and 100 meaning complete understanding of the rules and facility to implement them.

6.3 Results of studies previously conducted in Bolivia

To complement results of the market study and arrive at a more accurate picture of the situation the author searched for secondary data found the four studies presented below.

6.3.1 2006 AOPEB / ACSHA study in La Paz (FAO project TCP/RLA/3006)⁶⁸

The market study was carried out in the framework to develop a marketing plan for the ecological pilot project ACSHA (Asociación de Carpas Solares de Hortalizas de Achocalla). This association was founded in December 2001 and its forty families produce vegetables (mainly salads) in greenhouses and on open fields. It is based in Achocalla close to the markets of La Paz and El Alto. They are selling their products on markets in plastic bags with their logo on it to differentiate them from the conventional competitors.

The market study was carried out by the student Teodoro Apaza Siñani who did it as part of his thesis and was supported by AOPEB. First a small survey (N=140) was conducted in four AOPEB “Super Ecológico” shops in La Paz to define the characteristics of the target group. The results were:

- 90% were aged between 20 and 56 years.
- The majority had a post secondary education.
- 79% had an monthly income higher than 1000 Bs (~133 \$ US) and 29% higher than 3000 Bs (~400 \$ US)⁶⁹.
- They lived in middle- to upper -class districts
- 19% frequented the “Super Ecológico” more then once a week, 31 % once a week and the rest less frequent
- The most demanded products were dry cereals, bread, teas, chocolates, dehydrated fruits, diet products, yogurt, cheese, honey, health products etc. Fresh vegetables were among the least demanded products.
- health and beauty aspects are important for the consumers

With these results and census data the population of the target group was defined to be 1,010,812 in La Paz and this led to the calculation of a minimum sample size of 450 for the big market study which included many more questions. This was carried out by three addi-

⁶⁸ FAO, 2006b is the report paper which is the basis for this chapter.

⁶⁹ The national minimum wage was 440 Bs at this time.

tional students in different parts of the city. Unfortunately, the only result that could be found in the report is that 254 consumers would be willing to buy 11 different vegetables almost weekly and directly from ACSHA.

Another part of the study was the assessment of the demand for ecological vegetables by two of the city's supermarkets, namely KETAL and Hipermaxi. The supermarkets were interested in establishing separated sections for ecological products. They said that the demand for these products was evident. The KETAL chain which has four markets in the city estimated an initial demand of 2000 bags (800 g - 900 g a bag) of vegetables. ACSHA's production is between 800 and 1200 bags a week and that is why they could not supply these supermarkets..

6.3.2 2004 Agrecol Andes study in Cochabamba (ECO Feria project)

This study was carried out by the Fundación Agrecol Andes in the framework of a project proposal for a regular market for ecological products in Cochabamba⁷⁰. It consisted of an analysis of the supply of fifteen ecological⁷¹ producers or processors around Cochabamba and a consumer survey with N = 438 in different parts of the city.

The major results of the producer / processor survey were:

- The majority of local fresh products have no differentiated sales channels and prices because most of them are sold through conventional sales channels⁷².
- The way of promotion for the fresh ecological products is mainly mouth to mouth by direct sale.
- One exemplary case is Granja Polen, a farm which sells its fresh products directly and packaged with a label on a weekly market in an upper class neighborhood where a price premium of 20% is realized.
- Most of the processed products are differentiated through their packaging and points of sale.
- The processed products also achieve a price premium in the extreme case of the Pairumani milk up to 300%.

70 Unpublished internal document: "Feria Ecológica Regular como estrategia de promoción de la producción, certificación y comercialización de los productos ecológicos en el Departamento de Cochabamba"

71 The products were categorized in "natural", "en conversión" and "ecológico" and fresh / processed with the majority not being certified (only two processors who export had a certificate)

72 The term conventional sales channels here means through intermediaries, agents and wholesalers.

The consumer survey was conducted by six interviewers in ten different locations which included the Cochabamba International Fair (FEICOBOL 2004), weekly markets where ecological products are actually sold, direct farmer's markets, markets for lower income classes, and a supermarket.

The main results of the consumer survey are listed below.

- 57% did not know the difference between ecological and conventional products. This percentage was lower in the upper-class markets and higher in the lower-class markets.
- 85% of the consumers were interested in buying ecological products. The figure for the biggest lower-class market (La Cancha) was only 50%.
- 62% did not know where to where to buy ecological products, and 25% said they knew (for example Super Ecológico, Protal and supermarkets)
- The ranking of preferred guarantee systems was: local certification (49%), foreign certification (24%), trust system (21%) and peer control (8%) with differences between age groups.
- The ranking of preferred identification of ecological products was: certification seal (59%), point of sale (17%), trade mark of producer (16%), oral information at point of sale (16%) and info material (16%).
- 81% of the consumers were explicitly willing to pay a price premium for ecological products. The average price premium of these consumers was 11.5%⁷³.
- The majority (50%) wanted to buy their ecological products at specialized markets, another 34% in special sections of existing markets and 16% in supermarkets.
- 52% of the consumers were interested in buying a whole range of products. Of the specific demand 25% was for dairy products, 24% fruit, 21% vegetables, 11% cereals and grains, 6% tubers, another 6% tea, coffee and cocoa and 5% others.

6.3.3 2002 FAO study ASOPEC Santa Cruz

This study by Dr. Marco Gemelli of the University of Perugia / Italy was conducted in the framework of the FAO project "GCP/INT/542/ITA –1992/2002"⁷⁴ in the La Florida province of Santa Cruz with the capital town of Samaipata. The main purpose of the project was na-

⁷³ These figures are own calculations made from the raw data in the report.

⁷⁴ Proyecto Interregional para la Participación, Conservación y Desarrollo de las Tierras Altas

ture conservation through integrated land-use and resource management which included the introduction of ecological agricultural practices. This led to the creation of ASOPEC (Asociación de Productoras Ecológicas), an ecological women's smallholder association which started marketing their ecological products in the year 2000. The study focused on the possibilities to improve ASOPECs marketing success with the creation of market information systems. It has a very good introduction on ecological agriculture in Latin America, complete with country profiles.

An interesting figure mentioned in the country profile of Bolivia is a 30% price premium⁷⁵ for certified ecological products which also appears in other non quotable sources. On pages 25ff Dr. Gemelli presents major stakeholders like AOPEB, ANAPQUI and EL CEIBO and on pages 39 to 44 he describes the agriculture in Bolivia in general and the study area in detail.

ASOPEC consisted of 60 producers in eight communities which produced vegetables and herbs, naturally colored wool and ceramics. They did not have any ecological certification or an AOPEB affiliation, but rather they had their products “certified” by the FAO project which also managed the marketing and covered 50% of the transport costs. The products were sold to the KETAL supermarket chain in Santa Cruz for a differentiated price and at half this price on the communal market of Santa Cruz. Also contacts to institutional direct clients such as hotels and restaurants were being made.

The market study consists of structured interviews with 37 producers, 3 presidents of associations, AOPEB staff, 5 responsables of purchasing departments of supermarkets and shops and 2 transport businesses. Also an assessment of the competitors was made.

The principle outcomes of the study in the field of the market were:

- The producers had no historical market data and did not calculate production times so they were unable to calculate the production costs and produce according to the demand of the market. This led to a diverse production of which on average 10% could not be sold.
- The cost for transportation added 100% to the producer price.
- The KETAL supermarkets returned and did not pay for 12.5% of the products that are not sold, because they spoil faster than conventional products and often also do not look optimal.

⁷⁵ This figure appears on the bottom of page 25 of [Gemelli, M., 2003](#).

- The responsible from the Hipermaxi supermarket was interested in introducing a line of ecological and unusual products for the wealthy and European consumers.
- 45.5% of the producers see supermarkets as the best marketing channel and 30,3% the direct clients.

6.3.4 1997 AOPEB study in La Paz

This study was carried out by Helmut Jacob of the University of Kassel / Germany as part of his diploma thesis in 1997. He was an intern with AOPEB and carried out a market study for this institution to define the target group of ecological consumers and how these consumers would like to identify and be informed about ecological products. The study is documented very detailed in Jacob's thesis (Jacob, H., 1999).

A small (N=14) series of interviews was conducted with producers and processors affiliated to AOPEB with the following main results:

- Most of the producers stated that they produced ecologically because of the better revenues and possible export opportunities.
- Most marketing was done through their presence at national and international fairs because most of the AOPEB affiliates were export-oriented.
- Most of the producers did use the AOPEB seal / logo.

The consumer survey (N=533) was conducted with seven previously trained interviewers in front of two supermarkets (KETAL and Zatt) and three Irupana stores in middle and upper-class neighborhoods of La Paz. The questionnaire contained 22 mostly closed questions and the major results are listed below:

- The importance of different places for household food purchases was ranked by the consumers as follows: 42% markets, 34% Supermarkets, 23% shops, 1% street vendors.
- The decision for a point of sale was made by the price (38%), presentation and hygiene (27%), the range of products (11%), vicinity (8%), exclusiveness of the products (5%), friendly atmosphere (4%) and others (7%). There was a clear reversal of importance between price and presentation in the income group above 1000 \$ US of monthly income.

- The most important property of the food for the consumers was its durability (89%), its vitamin content and nutritional value (68%), the taste (63%) and the price (54%), which again lost in importance for the higher income consumers.
- The packaging of food products is noticed by and important for 85% of the consumers and of these 57% are looking at the material, 28% at color and 15% the form of the package.
- 41% of the consumers did not know the difference between ecological and conventional products while the majority of the rest had very imprecise opinions using adjectives like natural or healthy. Some mentioned agrochemicals and some the irrigation with clean water.
- The preferred ecological guaranty for 56% of the consumers would be from an independent third party, for 24% a governmental control, for 15% a special trade mark and for 6% information by the sales personnel.
- 93% of the respondents would like to try ecological products

7 Discussion and interpretation of the results

In this chapter the results the results of the author's market probe, the expert's opinions and the above presented earlier studies are put together to arrive at a more complete assessment of the market situation.

7.1 Producers

As identified in chapter 6.1.1 there are four distinct ecological producer groups. These groups are not represented equally in the survey. The first group of the remote subsistence farmers is not covered at all. There were also some misunderstandings as to how to fill out the survey especially with question four about the reason to convert, which had to be eliminated from the analysis altogether. This problem arose because some questionnaires were not filled out in the presence of the author on the Bio Bolivia 2007 fair in La Paz. Nevertheless there are some results which describe the group of organic producers which are active on the national market.

Almost all producers defined ecological products through the absence of agrochemicals. More than a third used the word “natural” in their description and only a small minority (2) mentioned norms and certification as a criterion for the ecological quality.

The distinction between ecological and *natural* is important because the term natural is not protected by law 3525/06, which only protects the terms *ecológico*, *orgánico* and *biológico* and their derivations. So a product label saying “100% natural” does not mean that the product is ecological, but it is used widely by the producers and more than one third of them consider the terms to be equal. This is especially the case for the producers and processors who are not certified by a third party certifier (which is the majority).

The average number of sales channels the producers use is three to four and the most important (non-export) sales channels are markets and specialized shops but they use other channels as well. Sometimes the ecological production is also sold undifferentiated through conventional sales channels but the majority (76%) of the producers are able to sell their products at a higher price than comparable conventional products. This is especially the case for processed or dried products that are packaged. Generally the producers of fresh products have more difficulties to sell their products anywhere else than directly at markets, because often they do not meet the quantity and quality⁷⁶ the supermarkets or other shops demand. This leads to the tendency to package salads and other vegetables in plastic bags to differentiate and protect them.

Although over half of the producers have clients that ask for a guarantee, trust is still the way for more than half of the producers to guarantee the ecological status of their products. Some use the AOPEB logo to inspire trust and some think their “Registro Sanitario” certificate is enough. The third party ecological certification is only used by the producers who also export.

Most of the bigger producers have changed to ecological production for economic reasons especially to access the export market and most of the smaller ones have changed through development projects and NGO support.

Conclusively it can be stated that in the group of the small and medium size businesses there are a lot of producers and especially processors who do not have a clear understanding of what constitutes an ecological product according to the regulations and will

⁷⁶ Because the smaller producers have no cooling chain the products loose their quality fast and the shelf life is reduced.

have difficulties adjusting to the new law 3525/06. The easiest way for them to avoid this problem is by labeling their products as “natural”.

7.2 Retailers

Of the fourteen retailers who filled out the questionnaires only four were owners of the shop, the others were employees. The fact that mostly employees attend the stores was probably also the reason why in several shops they were reluctant to fill out any questionnaire without confirmation from the boss. Only specialized shops are included in the sample and no supermarket or market retailer, so results can be only valid for this group.

The shops are mostly located in middle- or upper-class neighborhoods and receive 20 to 200 clients a day. There are two chains which are Irupana and Super Ecológico and the rest are individual enterprises.⁷⁷

Only a very small percentage of the products in these shops are certified ecological. These are mostly coffee and chocolate and often there is a complete lack of fresh products like vegetables and fruit.

This lack of fresh products in the shops could be due to the fact that consumers are used to buying fresh products in markets rather than in shops⁷⁸ and that higher income classes prefer to buy everything in the supermarkets because of quality policies and hygienic standards. Furthermore, the vegetables are not a high value product and perish fast. That is why these specialized and often very small shops use their shelf space for high priced, processed, non-perishable goods that come in boxes or other containers that can be easily stacked. These products include a range of cereals, teas, food supplements, honey, dried fruit, cosmetics, soya-products and natural medicines.

The majority of surveyed store attendants define an ecological product through the absence of chemicals in the production but also more than half of them think that ecological and natural products are the same.

The product quality in the shops is mainly guaranteed through personal checks on the supplier side and through trust on the consumer side. Certificates and labels do not play an important role in the marketing but rather producer brands like El Ceibo or Irupana have the trust of the consumers. These products are sold with a premium price.

⁷⁷ See Annex IX for some examples

⁷⁸ This is a result of the 1997 AOPEB study presented in chapter 6.3.4.

The supermarkets are interested in ecological products and already have some certified products on their shelves. These are also mainly processed products because there is no steady supply of fresh ecological vegetables. Some packaged salads from greenhouses are sold with ecological claims but the only certified “fresh” product the author saw in a supermarket was an onion⁷⁹.

Conclusively it can be stated that the smaller shops are laid out and earn their money selling mainly packaged and processed high quality (high added value) and high price products, while the fresh products are mainly still sold at the markets (sometimes special sections of markets). The Supermarkets have an interest and potential in the market for fresh ecological products and also home delivery schemes could be successfully developed.

7.3 Consumers

Because most of the questionnaires were filled out at ecological points of sale or at the ecological fair (Bio Bolivia 2007) the results of the consumer survey are only valid for the group of people who already have gotten in contact with the concept of ecological products⁸⁰. This group has mostly post-secondary education and belongs to the middle- or upper-social classes. Their households have an average of around four members. They demand mainly processed cereal products, coffee, tea, chocolates and fresh fruit and vegetables which they prefer to buy in the specialized shops, at special market stands or in supermarkets. There is also a demand for direct home delivery of ecological products, as shown by the 2006 AOPEB / ACSHA study. Half of the consumers frequent the ecological points of sale at least once a week. They ask questions about the origin and quality of the products and are willing to pay a price premium of around 9% - 30%⁸¹ for guaranteed ecological products. The main reason for buying ecological products is the personal health and wellness aspect, that is why they also like to buy food supplements like Stevia or Maca powders and natural shampoos. More than half of them considers the term natural to be equivalent to the term ecological or even consider natural products to be healthier. Because there is no widely known logo or certificate for ecological products, the consumers base their purchases mainly on their trust in the point of sale. They are attracted by clean, hygienic stores, with an adequate presentation of the products. Also competent

79 See Annex VIII for some examples.

80 Of the consumers 86% stated they knew the difference between ecological and conventional products.

81 9% is the figure found by the author and close to the 10% of the Agrecol Andes study while 30% is a figure that appears in various other publications.

sales personnel who can answer their questions and the vicinity to the regular shopping places or residential zones are important factors here. Most of them would prefer to identify ecological products by a label of a certification body rather than through a national label or just trust. In general this group of middle- and upper-class households can be described as influenced by western (mainly US-American) lifestyles. The LOHAS ([Lifestyle Of Health And Sustainability](#)) which is a growing market segment in western countries is also influencing a small consumer group in Bolivia.

In the total adult Bolivian population the degree of consciousness about the ecological concept was estimated by the experts to be at 23%. The Agrecol Andes study found an average of 43% of the people interviewed in Cochabamba to have knowledge of the term but with a big difference between low and high income neighborhoods so the experts figure of 23% seems to be more adequate for urban Bolivia. Parting from these figures below there is the attempt to estimate the size of the ecological consumer group in Bolivia.

If taking the urban (62%) Bolivian population which is over 25 years old (63%) and multiplying it with the expert's 23% we arrive at a figure of 830,805 ecologically conscious urban people which are over 25 years old and are potential ecological consumers. If out of this we now take the figure of 31% which the experts stated as active ecological consumers inside the conscious group we arrive at an 257,549 active ecological, urban consumers over 25 years old. If we now only take the urban population of the metropolitan areas of La Paz, Santa Cruz and Cochabamba⁸² (65%) we arrive at 167,407 for these three urban centers which would mean 70,849 in La Paz, 53,426 in Santa Cruz and 43,132 in Cochabamba⁸³. This whole calculation is based on the figure of 7.13% of active ecological consumers as the mean of the experts opinions about consumer consciousness and behavior which was described in chapter [6.2.4](#). **The figures thus have to be considered as rough estimates.**

7.4 *SWOT Analysis*

The growth of the share of ecological products in the Bolivian market for food is the objective of the following SWOT analysis.

Strengths are, that in the major cities there already exist a number of specialized shops and there are producers who produce ecologically as well as consumers who buy the

82 Only in these cities there exists a somehow developed and active ecological market.

83 For the the calculations the total population was put at 9,247,816 (2008 est.) and the other data is 2001 census data.

products. There is a producer's association (AOPEB) which represents a number of producers and has had big influence on the political decisions and agenda regarding ecological agriculture. To add to this fact, a big number of poor subsistence farmers are still cultivating their fields in traditional (ecological) ways and there is a number of development projects of NGOs and other implementing agencies working in the field of ecological agriculture. Furthermore, the government has already passed legislation explicitly allowing an easier (more accessible to all) way for certification for the national market. It also included the promotion of ecological agriculture in various development plans.

Weaknesses are the generally low consumer awareness of the ecological concept as well as the producers lack of knowledge of ecological production methods. Also the truly ecological product is currently very difficult to distinguish from conventional products because false ecological denominations are used in an unregulated way. There is no single common label or other identification⁸⁴ and most of the ecological shops also sell non-certified and conventional products. This confuses the consumer and decreases her/his willingness to pay a price premium. The SENASAG and especially the responsible team for the national ecological control system is underfunded and the system is not working / functioning yet. Another weakness is the product range of the shops, which is very narrow and often only consists of dry, processed and specialty products totally lacking a range of fresh fruit and vegetables or milk. The differentiated shops are also only present in the major cities and thus in the other parts of the country no market for ecological products exists. Furthermore the weak infrastructure and the resulting long ways to the market and relatively high marketing costs are prohibitive to poor rural farmers who want to market their ecological products in the cities where a differentiated market exists. That is why a lot of ecological products are sold undifferentiated along with the conventional ones.

Opportunities in the future are the full implementation of law 3525/06 and the national control system along with an information and education campaign by the government and NGOs. Given that enough resources are allocated to these activities, consumer awareness could rise. The common national label would also clearly differentiate ecological products which would rise the willingness of the consumers to pay a price premium or at least prefer the guaranteed ecological product over the conventional one. Another opportunity is if public institutions follow the guidelines of the government and give preference to

⁸⁴ There has been and still is the AOPEB label and some Labels of Bio Latina, IMO or Bolicert but not all ecological producers use them because they cost money.

ecological products when acquiring food, for example for school lunches. All this would increase demand for ecological products and the supply would follow.

Threats can be the great political instability which could result in the rejection of the new constitution and a changed government which would obliterate the development plans of the current one. The political quarrels also might consume further attention and resources for the implementation of the national control system. Even if the control system could be established there is a high risk that the resources for a control of the market (false declaration) would be insufficient. A lack of resources also means that a nationwide information and education campaign will be not sufficient or, worse, completely missing. This is especially important as most of the consumers do not see a difference between “ecological” and “natural” which is not a legally protected term. All of this would mean that in reality uninformed consumers would still be confronted with an unregulated market. Like this the number of consumers preferring and searching for ecological products would not increase and it would remain a small niche market.

8 Conclusion and Recommendations

On the previous pages the situation of the market for ecological products in Bolivia was discussed and examined also putting a special focus on the new law 3525/06 on ecological production.

Certified ecological production in Bolivia is mainly for export and also the lobby (AOPEB and Exporters) worked in the past primarily to facilitate exports. That is a major reason why a national legislation was pushed forward by AOPEB which was designed to be equivalent to most international standards and especially targeting the third country status for ecological exports to the European Union. Around 2005 the focus of AOPEB and later the government changed to include the national market into their projects and this resulted in a legislation that has a split control system with a strict third party certification for the export market on the one hand and the possibility for alternative and less costly certification schemes for the national market on the other hand. This is a very innovative and progressive legislation for a developing nation such as Bolivia, for it considers the often prohibitive costs of regular third party certification for poor farmers and gives them an alternative option. In this way the development of a national market for ecological products is fostered.

The difficult point is when this theory hits the Bolivian reality which is characterized by widespread poverty, political instability, widely uncontrolled markets, deficient infrastruc-

ture due to the challenging topography and last but not least almost completely uninformed producers and consumers when it comes to ecological agriculture and products. All these factors pose a big threat to the proper function of the new national control system. The poverty will hold back a huge majority of the population from buying guaranteed ecological products for a premium price. The lack of funds on the side of the government could slow down the implementation and execution of the control system and probably will also not suffice to launch the necessary information campaign. The political instability can cause the discontinuity in the personnel responsible for the implementation of the law and also put the focus on more urgent and immediate political projects and struggles. The markets are very difficult to control and a control for false ecological declarations is very unlikely to be established on a scale bigger than some samples and even then there is a high risk of corruption by the inspectors. The deficient infrastructure will keep remote small farmers from participating in the differentiated market for fresh ecological products which is currently only existent in the big cities. The most important factor is the knowledge of the consumers and producers about ecological products and production methods. Today most Bolivian market-oriented farmers use agrochemicals often even in very irresponsible ways. The main reason for these farmers to convert to ecological production methods would be a premium price for ecological products. On the side of the consumers the consciousness could only be raised through a media campaign introducing the ecological concept and the new national logo and a continuous support of ecological agriculture by a special government program as exists in Costa Rica.

The research question was: *“If in Bolivia a regulating law for organic agriculture, processing and marketing will be able to promote the growth of the local market for organic products, thus providing consumers with the opportunity to consume healthy and nutritious food while paying a fair price to the producer who produces using environmentally sound practices.”*

The answer to this question is that such a positive effect of the organic legislation can only be achieved if, apart from the law, there is a strong commitment of the government to promote organic production and consumption through support and extension for the farmers and education and promotion for the consumers. These would be cost intensive programs and it is very likely that the Bolivian government, although committed to the ideas, will not be able to finance them unless external donors give financial and logistic support.

To obtain an accurate picture of the situation and adjust the necessary policies and projects, further research including a complete market study should be carried out as soon as the SENASAG has registered all certifiers and producers.

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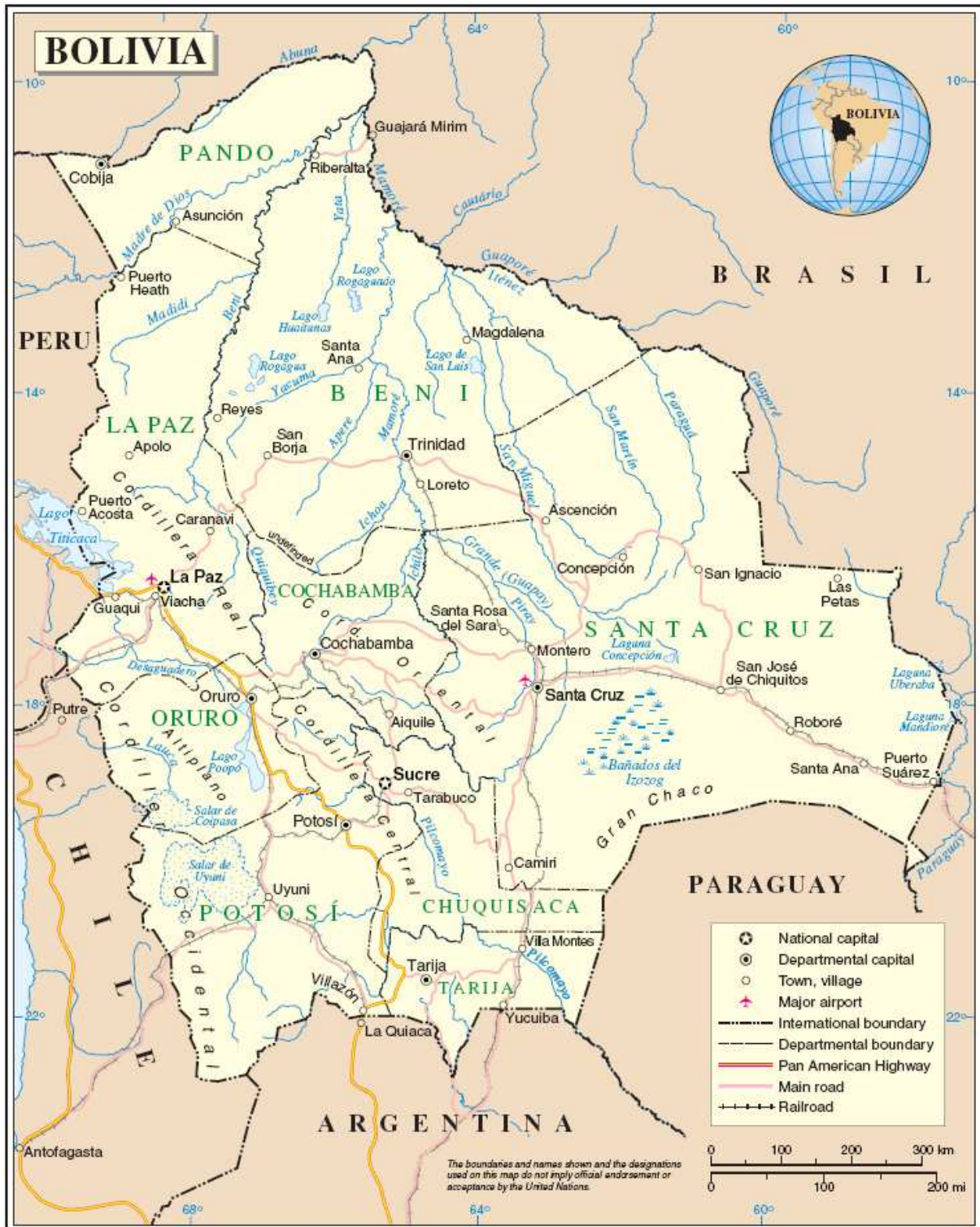
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Annexes

Political map of Bolivia



Map No. 3875 Rev. 3 UNITED NATIONS
August 2004

Department of Peacekeeping Operations
Cartographic Section

Source: <http://www.un.org/Depts/Cartographic/map/profile/bolivia.pdf> (25.06.2008)

The surveys

Ecological producers and processors:

9. ¿Promociona a sus clientes sus productos ecológicos como tales? Sí No
10. ¿Vende Ud. los productos ecológicos a un precio igual o más alto comparado al precio del mismo producto de calidad convencional? Igual precio Precio más alto
11. ¿Como garantiza al cliente que sus productos realmente son ecológicos?
- _____
- _____
12. ¿Tiene clientes que exigen una garantía que los productos realmente son ecológicos?
- No Sí ¿Cuanto por ciento de sus clientes exigen una garantía? _____ %
13. ¿Cuenta con certificación para sus productos ecológicos? No Sí
- ¿Cual? _____
- _____
14. ¿Si cuenta con certificado, cual es el porcentaje del producto que va a la exportación y cual se comercializa dentro del país?
- | | |
|-------------|------------------|
| Exportación | mercado nacional |
| | 0% |

Gracias por su tiempo invertido en llenar esta encuesta!

Este estudio se realiza como parte de la tesis de grado de Arnd Zschocke en el programa de "Maestría en Agricultura Ecológica Internacional de la Universidad de Kassel/Witzenhausen en Alemania. Si tiene algunas preguntas o quiere ser informado sobre los resultados de este estudio por favor deje su dirección electrónica y nombre en el espacio abajo o escriba a:

arzschocke@student.uni-kassel.de

e-mail: _____

nombre: _____

Questionario sobre la producción de productos ecológicos en Bolivia para productores o procesadores de productos ecológicos

Nro.: _____

Nombre del Productor/Asociación/Empresa: _____

Dep/Prov/Mun/Comunidad/Dirección: _____

Contacto: Tel.: _____ E-mail: _____

Cel.: _____ WWW: _____

¿Es Ud. dueño del negocio o empleado? Dueño Empleado

Fem. Masc.

1. ¿Es Ud. productor o procesador de productos ecológicos? Productor Procesador

2. ¿Qué es un producto ecológico?

3. ¿Ud. cree que "producto ecológico" y "producto natural" es lo mismo?

Sí

No ¿Qué es la diferencia? _____

4. ¿Por qué razón(es) se ha convertido en productor / procesador ecológico?

Por favor marque con un número de 1 a 6 según la importancia que tienen los argumentos abajo para Ud

Un mercado con precios elevados para los productos ecológicos

Métodos de producción ecológica más baratos

Efectos negativos de la aplicación de los agroquímicos a la salud del productor / procesador

Efectos negativos de los agroquímicos a la fertilidad de suelo y sostenibilidad de la producción

Autoconsumo saludable e independencia de insumos externos (soberanía alimentaria)

Otro: _____

5. ¿Dónde vende Ud. sus productos?

por mayor a intermediarios

por mayor en mercados mayoristas

por mayor a tiendas

por mayor a supermercados

por menor en mercados

por menor en propia tienda

Otros _____

6. ¿Cuántos medios / canales de comercialización diferentes tiene ahora?

7. ¿Produce y vende productos convencionales también? No Sí

8. ¿Qué productos ecológicos produce o procesa Ud.?

Hortalizas

Frutas

Tubérculos

Otros _____

Hierbas y medicinas

Productos cosméticos

Productos de origen animal

(Miel, Charque etc.)

Questionario sobre la comercialización de productos ecológicos en Bolivia

para dueños y personal de venta de puntos de venta de productos ecológicos y/o naturales

Nro. _____

Nombre del negocio: _____

Dep/Prov/Mun/Comunidad/Dirección: _____

Contacto: Tel.: _____ E-mail: _____

Cel.: _____ WWW: _____

¿Es Ud. dueño del negocio o empleado? Dueño Empleado

Fem. Masc.

1. ¿Qué es un producto ecológico para Ud.? _____

2. ¿Ud. cree que "producto ecológico" y "producto natural" es lo mismo?

Sí No ¿Qué es la diferencia? _____

3. ¿Ud. vende productos ecológicos? Sí No Si ha marcado no, la encuesta termina aquí para Ud.

4. ¿Qué productos ecológicos vende Ud.?

- Hortalizas Cereales y granos Hierbas y medicinas
- Frutas Productos lácteos Productos cosméticos
- Tubérculos Té, café, cocoa Productos de origen animal (Miel, Charque etc.)
- Otros _____

5. ¿También vende productos convencionales? No Sí ¿Cuales? _____

- Hortalizas Cereales y granos Hierbas y medicinas
- Frutas Productos lácteos Productos cosméticos
- Tubérculos Té, café, cocoa Productos de origen animal (Miel, Charque etc.)
- Otros _____

6. ¿Qué porcentaje de sus ventas se realiza con productos ecológicos? _____ %

7. ¿Vende Ud. los productos ecológicos a un precio igual o más alto comparado al precio del mismo producto de calidad convencional? Igual precio Precio más alto

8. ¿Promociona sus productos ecológicos al consumidor como tales? Sí No

III

Personnel or owners of points of sale for ecological products

9. ¿Cómo averigua que sus proveedores realmente proveen productos ecológicos?

10. ¿Cómo garantiza al cliente que los productos realmente son ecológicos?

11. ¿Tiene clientes que preguntan por la procedencia/garantía de los productos ecológicos?

No Sí ¿Cuántos clientes preguntan a la semana? _____

12. ¿A que rangos de edad pertenecen sus clientes que compran productos ecológicos?

Por favor asigne un porcentaje de 0 a 100 a cada una de las categorías

| | | | | | |
|---------|---------|---------|---------|------|------|
| 18 - 24 | 25 - 35 | 35 - 45 | 46 - 60 | > 61 | 100% |
| | | | | | |

13. ¿Cuántos clientes tiene al día? _____

Gracias por su tiempo invertido en llenar esta encuesta!

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arzschocke@student.uni-kassel.de

e-mail: _____

nombre: _____

Questionario sobre la demanda de productos ecológicos en Bolivia

Fecha: _____ Lugar: _____ Nro.: _____
O Fem. O Masc. Nro. de miembros de su hogar: _____

| Rango de Edad | |
|---------------|---------|
| 18 - 24 | 25 - 34 |
| 35 - 45 | 46 - 60 |
| > 61 | |

Preguntas:

- ¿Ud. sabe cuál es la diferencia entre un producto ecológico y un producto convencional?
 No
 Sí ¿Cuál es? _____
- ¿Ud. cree que "producto ecológico" y "producto natural" es lo mismo?
 Sí
 No ¿Qué es la diferencia? _____
- ¿Ud. está interesado en comprar productos ecológicos?
 No
 Sí ¿Cuáles? _____
- ¿Sabe Ud. donde comprar productos ecológicos?
 No
 Sí ¿Dónde? _____
- ¿Alguna vez ha comprado productos ecológicos?
 con frecuencia
 Pocas veces
 Nunca
¿Qué productos ha comprado?

¿Cómo sabía/comprobó que el producto que compró realmente era ecológico?
 confianza en el vendedor / productor
 confianza en el lugar de venta
 etiqueta / marca del productor en el producto
 sello de garantía de una entidad certificadora
- ¿Cómo prefería identificar productos ecológicos y asegurarse que sean realmente ecológicos?
 confianza en la palabra del vendedor / productor
 confianza en un lugar de venta diferenciado (solamente productos ecológicos en venta)
 marca del productor en el empaque
 sello de garantía de una entidad certificadora
 sello de garantía nacional

Consumers of ecological products

7. ¿Ud. estaría dispuesto a pagar un precio elevado por un producto ecológico garantizado?

Si su respuesta es sí, por favor indique cuantos porcentos más sería dispuesto a pagar.

no 5% más 10% más 15% más 20% más otro% _____

8. ¿Cual es su nivel de formación?

primaria secundaria universitaria

9. ¿Ud. es la persona responsable de las compras de comida en su hogar? Sí No

10. ¿Cuanto dinero se gasta mensualmente por comida en su hogar? _____ Bs

Gracias por su tiempo invertido en llenar esta encuesta!

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arzschocke@student.uni-kassel.de

e-mail: _____

nombre: _____

Questionario sobre el mercado nacional de productos ecológicos en Bolivia para expertos / técnicos del sector

Ni.: _____
 I. Datos del entrevistado: Fem. Masc. Edad: _____

Nacionalidad: _____ años
 Si no es Boliviano, cuanto tiempo ya vive en Bolivia?

1. **¿Como califica Ud. sus conocimientos sobre la producción ecológica y productos ecológicos.** Por favor marque una de las cinco categorías abajo:

| | | | |
|-----------------------------------|--|--|--|
| No se de que se trata exactamente | Conozco algunos principios básicos aplican | Tengo algunos conocimientos del manejo ecológico de cultivos | Tengo profundos conocimientos de todos aspectos relacionados |
|-----------------------------------|--|--|--|

2. **¿Conoce normas técnicas y regulaciones para la producción ecológica?** No Si
 Por favor de ejemplos: _____
 1. _____
 2. _____
 3. _____

3. **¿Como califica Ud. sus conocimientos sobre las condiciones de vida y producción agrícola de la población rural de Bolivia?**
 Por favor asigna un valor entre 0 (ninguna idea) y 5 (profundos conocimientos de todos los aspectos relacionados)

4. **¿Trabaja Usted con agricultura ecológica o productos ecológicos?** Si No
 5. **¿Trabaja Usted con agricultura o desarrollo rural?** Si No
 6. **¿En qué Organización trabaja?** _____
 7. **¿Qué nivel de formación tiene?** Primaria Secundaria Universitaria Postgrado

II. **Encuesta:** En la siguiente encuesta acerca del mercado nacional para productos ecológicos Ud. puede estimar y dar su opinion aproximada sobre las cifras.

8. **¿En su opinión, qué porcentaje de los Bolivianos económicamente activos conocen el concepto de la agricultura ecológica y productos ecológicos?** _____ %
 Por favor asigna un valor entre 0 % y 100 %.

9. **¿En su opinión, qué porcentaje de estos Bolivianos concientes del concepto de la agricultura ecológica buscarían activamente productos ecológicos?** _____ %
 Por favor asigna un valor entre 0 % y 100 %.

10. **¿En su opinión, qué porcentaje de los Bolivianos concientes del concepto de la agricultura ecológica pagaría un precio superior por productos ecológicos, y cuánto más pagarían?** Por favor asigna un valor entre 0 % y 100 %, a cada una de las categorías.

| | | | | | |
|----------------|---------|---------|---------|-------------------|--------|
| no pagaria más | 5 % más | 10% más | 15% más | 20% más > 20% más | = 100% |
|----------------|---------|---------|---------|-------------------|--------|

11. **¿En su opinión, de qué edades esta compuesto el grupo de los consumidores ecológicos de Bolivia?** Por favor asigna un valor entre 0 % y 100 %, a cada una de las categorías.

| | | | | | |
|---------|---------|---------|---------|------|--------|
| 18 - 24 | 25 - 35 | 35 - 45 | 46 - 60 | > 61 | = 100% |
|---------|---------|---------|---------|------|--------|

Experts on the ecological agriculture and the local market

12. **¿En su opinión, de qué niveles de educación esta compuesto el grupo de los consumidores ecológicos adultos de Bolivia?**
 Por favor asigna un valor entre 0 % y 100 % a cada una de las categorías.

| | | | |
|----------|------------|---------------|--------|
| primaria | secundaria | universitaria | = 100% |
|----------|------------|---------------|--------|

13. **¿En su opinión, de qué niveles de gastos mensuales por comida por persona esta compuesto el grupo de los consumidores ecológicos de Bolivia?**
 Por favor asigna un valor entre 0 % y 100 % a cada una de las categorías.

| | | | |
|-----------------------------|--------------------------|----------------------------|--------|
| menos de 200 Bs por persona | 200 a 500 Bs por persona | más que 500 Bs por persona | = 100% |
|-----------------------------|--------------------------|----------------------------|--------|

14. **¿En su opinión, que tipo de garantía de productos ecológicos prefiere el consumidor ecológico boliviano para asegurarse de la calidad ecológica del producto?**
 Por favor asigna un valor entre 0 % y 100 % a cada una de las categorías.

| | | | | | |
|---------------------------|----------------|-----------------------------------|---|---------------------------|--------|
| confianza en el productor | lugar de venta | marca del productor en el empaque | certificado de una entidad certificadora nacional | selo de garantía nacional | = 100% |
|---------------------------|----------------|-----------------------------------|---|---------------------------|--------|

15. **¿En su opinión, en comparación con el estado actual, cuanto va a crecer el mercado nacional para productos ecológicos en los proximos años?** Por favor asigna un porcentaje a cada una de las categorías.

| | | | |
|-------|--------|--------|---------|
| 1 año | 2 años | 5 años | 10 años |
|-------|--------|--------|---------|

16. **¿Cuales son los obstáculos prevalentes que impiden un crecimiento rápido del mercado nacional para productos ecológicos?** Por favor de tres razones.

1. _____
 2. _____
 3. _____

17. **¿En su opinión, que razones podrían convencer a los productores a cambiar a una producción ecológica?** Por favor asigna un porcentaje a cada una de las categorías

| | | | | | |
|---|---|--|--|---|--------|
| un mercado con precios elevados para los productos ecológicos | métodos de producción ecológica más baratos | efectos negativos de los agroquímicos a la salud del productor | efectos negativos de los agroquímicos a la fertilidad de suelo y sostenibilidad de la producción (soberanía alimentaria) | autoconsumo saludable e independencia de insumos externos | = 100% |
|---|---|--|--|---|--------|

otra razon: _____

18. **¿Hasta qué punto podrían seguir / entender las normas técnicas y condiciones de certificación los productores de las siguientes categorías sin mayor ayuda técnica?**
 Por favor asigna un nivel de conformidad / entendimiento de las normas en una escala de 0 a 100 para cada categoría de productores.

| | | |
|------------------------------|----------------------------|-------------------------------|
| Agricultor individual grande | Asociación de agricultores | Agricultor individual pequeño |
|------------------------------|----------------------------|-------------------------------|

Gracias por su tiempo invertido en llenar esta encuesta!
 Este estudio se realiza como parte de la tesis de grado de Arnd Zschecke en el programa de "Maestría en Agricultura Ecológica Internacional" de la Universidad de Kassel/Witzenhausen en Alemania.
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 arzschocke@student.uni-kassel.de

e-mail: _____
 nombre: _____

Espacio para comentarios

Questionario sobre la Ley 3525/06 y su implementación en Bolivia para expertos / técnicos del sector

1. ¿Trabaja Usted con agricultura ecológica o productos ecológicos? SI No
- ¿Trabaja Usted con certificación de productos ecológicos? SI No

1.1. ¿En qué Organización trabaja? _____

Nro.: _____

2. ¿Conoce Ud. la Ley 3525/06 y su norma técnica? SI No

Si ha marcado "No", este cuestionario termina aquí para Ud.

3. ¿Si la conoce, como califica Ud. sus conocimientos acerca de la ley 3525/06 y su norma técnica? Por favor marque una de las cinco categorías abajo.

| | | | | |
|--|---------------------------------------|---|--|---|
| He escuchado hablar sobre la Ley 3525/06 | Tengo idea de que se trata en general | Conozco la estructura de la ley y las normas técnicas | Conozco a la Ley 3525/06 y la he leído | Tengo profundos conocimientos de todos los aspectos relacionados a la ley 3525/06 |
|--|---------------------------------------|---|--|---|

4. ¿Que otras normas técnicas o regulaciones para la producción ecológica conoce? (De Bolivia u otros países)

1. _____

2. _____

3. _____

5. ¿Ud. cree que la Autoridad Nacional Competente (SENASAG) tiene suficientes recursos (humanos e económicos) para implementar y manejar el sistema de acreditación, certificación y control del uso del sello ahora?

SI

No

¿Por qué "No"? Por favor explica y de sus razones.

1. _____
2. _____
3. _____

6. ¿En su opinión, cuando va a ser implementado y estar en funcionamiento el Sistema Nacional de Control para la Producción Ecológica (SNCPPE) en Bolivia?

Por favor marque una de las categorías abajo.

| | | | | |
|-------------------|-----------------|------------------|------------------|------------------|
| dentro de 6 meses | dentro de 1 año | dentro de 2 años | dentro de 3 años | dentro de 4 años |
|-------------------|-----------------|------------------|------------------|------------------|

7. ¿Cree Ud. que la Ley 3525/06 y sus normas técnicas tienen que ser cambiadas en algunos puntos?

No

SI

¿En qué puntos cree Ud. que deben ser cambiadas? Por favor explique.

Experts on the new legislation

8. ¿Con su conocimiento de la Ley, Ud. cree que va a ser obligatorio obtener el sello nacional para un operador quien solamente quiere comercializar sus productos ecológicos en el exterior y ya cuenta con otro certificado equivalente para la exportación (EEUU, UE o otros países)?

- SI
- No
- ¿Esto significa que Ud. cree que solamente necesitaran obtener el sello nacional los productos ecológicos que se comercializan en el área nacional de Bolivia? SI No
- Si quiere explicar un poco más al detalle su opinión acerca de esta pregunta, por favor use el espacio abajo

9. ¿En cuantos años, cree Ud., Bolivia va a conseguir estar inculuida en la lista de países terceros de la Union Europea?

Por favor marque una de las categorías abajo.

| | | | | |
|------------------|------------------|------------------|-------------------|-----------------------|
| dentro de 2 años | dentro de 4 años | dentro de 7 años | dentro de 10 años | dentro más de 10 años |
|------------------|------------------|------------------|-------------------|-----------------------|

10. ¿Ud. cree que la Autoridad Nacional Competente (SENASAG) en el futuro va a ser suficientemente fuerte para controlar y regular el mercado nacional de productos ecológicos especialmente en relación al etiquetado y uso ilegal del sello nacional?

En una escala de I a IIII = número central: III = sentirá familiaridad más central podría elegir al SENASAG?

Gracias por su tiempo invertido en llenar esta encuesta!

Este estudio se realiza como parte de la tesis de grado de Arnd Zschecke en el programa de "Maestría en Agricultura Ecológica Internacional" de la Universidad de Kassel/Witzenhausen en Alemania.

Si tiene algunas preguntas o quiere ser informado sobre los resultados de este estudio por favor deje su dirección electrónica y nombre en el espacio abajo o escriba a:

arzschocke@student.uni-kassel.de

e-mail: _____

nombre: _____

Espacio para comentarios

Questionnaire for certifying bodies to estimate the national certified production for export

Questionario sobre la producción y certificación de productos ecológicos en Bolivia

Nombre de la certificadora: _____

Dirección: _____

Contacto: Tel.: _____ E-mail: _____

otro: _____

1. ¿Desde cuando esta activo en Bolivia? _____

2. ¿Qué acreditaciones tiene actualmente? Por favor ponga en orden de importancia (Nro. de certificados expedidos)

1. _____

2. _____

3. _____

4. _____

5. _____

3. ¿Cuántos operadores esta certificando en el 2007? _____

4. ¿Cuántas hectareas esta certificando en el 2007? _____ ha

5. ¿Cuántos productos diferentes esta certificando actualmente? _____

6. ¿Cuáles son los cinco productos más importantes?

1. _____

2. _____

3. _____

4. _____

5. _____

7. ¿Qué area (en hectareas) estan cultivando el agricultor más grande y más pequeño que Ud. certifica?

Solamente area ecológica

más grande _____ más pequeño _____

8. ¿Del total de sus clientes, cuál es aproximadamente el porcentaje de las siguientes categorías?

Asociaciones de agricultores _____ %

Agricultores individuales con menos de 5 ha _____ %

Agricultores individuales con 5 a 50 ha _____ %

Agricultores individuales con más de 50 ha _____ %

Procesadores _____ %

} = 100%

9. ¿Qué porcentaje de los productos que Ud. certifica va a la exportación? _____ %

10. ¿Ud. planea ser acreditada / registrada en Bolivia por la autoridad nacional competente segun la ley 3525/06?

No

Sí

¿Cuando? _____

Gracias por su tiempo invertido en llenar esta encuesta!

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arzschocke@student.uni-kassel.de

e-mail: _____

nombre: _____

A selection of organic labels found on products in Bolivia



CEBOLLA DULCE 100% ORGANICA
SELECCIONADA Y CLASIFICADA

| | | | | | |
|--|---------------------------|-------------------------------|---|--|--|
| PRODUCCION POR: BOLIVIA PRODUCE S.A. Av. Salamanca N-0675 Edificio Sateco, 3er piso ofi.c. 3-6 Telf./Fax: (41) 452 1503 Cochabamba-Bolivia | FECHA EMPAQUE 28-04-07 | VARIEDAD Cantory | PESO NETO [] | CLASE 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> | TIPO EXTRA <input type="checkbox"/> ESPECIAL <input checked="" type="checkbox"/> COMERCIAL <input type="checkbox"/> |
| CERTIFICADO POR: 100% ORGANIC control IMO cod. IMO-SCES-004 | CODIGO [] | FECHA VENCIMIENTO 28-04-07 | CONSERVAR EN LUGAR FRESCO Y VENTILADO • PRODUCTO SUJETO A PERDIDA DE PESO | | |



Photos by Arnd Zschocke

Ecological retailers and signs



Photos by Arnd Zschocke



Photos by Arnd Zschocke



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