

## Concepts and actors in organic livestock husbandry in Bolivia

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### Abstract:

*Traditional smallholder livestock production is expected to correspond widely with principles of organic livestock farming. Though, the real magnitude of livestock under organic and alike management is unknown. From stakeholder analysis and structured interviews with key persons in Bolivia it is deduced that similarities are widely given, whereas it is questioned whether a formal individual certification approach for livestock products will match the farmer interests and consumer demands.*

### Introduction and Objectives:

During the last decades, organic agriculture has developed rapidly all over the world. Organic farming is practised in approximately 100 countries and the area under organic management is continuously growing. In Bolivia, the land under organic production grew from 31,025 certified ha in 2000 to 364,100 in 2002. In the same period, the number of organic farms increased from 5240 to 6500, which means a share of 1.04 per cent of total agricultural area (WILLER & YUSSEFI 2004). According to GÄRTNER (2005), organic certified livestock production in Bolivia nearly does not exist, though organic Bolivian crop products enter international markets. The main obstacle faced by peasants in order to become certified organic farmers is economic rather than linked to the production process itself (CÁCERES 2005). However, traditional ways of life and management techniques of Bolivian smallholders seem to correspond largely with the concepts of organic farming (RIST 2001). The main objective of this study was to identify similarities and dissimilarities of traditional livestock production systems in the highlands of Bolivia to legislations of IFOAM (International Federation of Organic Agriculture Movements), and to identify magnitude, state and prospects of Bolivian organic and alike livestock production.

### Methods:

To compare traditional livestock production systems in the Bolivian Andes with concepts of organic livestock production according to IFOAM standards (2002), semi-structured interviews (ATTESLANDER 2000) were conducted with five technicians of AGRUCO (Centro de Excelencia Universitario en Agroecología y Revalorización de los Saberes Locales, Universidad Mayor de San Simón, Cochabamba, Bolivia) active in the communities Tapacari and Sipe Sipe, in the Department of Cochabamba. To facilitate comparison a categorization of different aspects concerning animal management, origin of animal sources, mutilations, veterinary medicine, breeds and breeding, animal nutrition and transport and slaughter was established.

Two structured interviews via e-mail for international stakeholders and 14 personal structured interviews with national actors were accomplished to obtain information about demand structure, possible prospects and extension activities of the certified and non-certified organic livestock sector in Bolivia.

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In the stakeholder analysis (GRIMBLE 1998), different stakeholders like producers, traders, shopkeepers consumers, certifiers, foundations, non-governmental organizations and the Bolivian government involved with organic or alike husbandry were identified. Subsequently, visualization with concept map software was realised to highlight interconnections as well as the absence of connections between the actors. Three case studies, not shown here, further complemented the study (KNEER 2006).

## **Results and Discussion:**

### **Similarities and dissimilarities of concepts**

Assessments about animal management showed conformance in the aspects of maintenance of herd structure, animal husbandry in cages and land tenure organization (Tab 1). The aspect of access to sufficient forage and water was valued as mostly analogue given the seasonal fluctuations between the dry and rainy season that determine water and forage availability.

Tab. 1: Overview on conformance of traditional livestock husbandry systems in the communities of Tapacari and Sipe Sipe with rules and legislations of IFOAM.

	Conformance	+/- Conformance	No conformance
<b>I Animal management:</b>			
Appropriate stocking density		X	
Access to sufficient water / forage		X	
Access to shelter		X	
Maintenance of herd structure	X		
Keeping of animals in cages	X		
Protection for wild and feral animals		X	
Land tenure organization	X		
<b>II Animal sources/origin:</b>	X		
<b>III Mutilations:</b>		X	
<b>IV Veterinary medicine:</b>			X
Preventive disease measures			X
Veterinary techniques		X	
Synthetic substances	X		
Vaccinations		X	
<b>V Breeding goals:</b>	X		
<b>VI Animal nutrition:</b>			
Forage composition		X	
Nutritional needs		X	
Origin of forage	X		
Feeding of by-products	X		
Fodder subjection to chemicals		X	
Growth promoters, stimulants	X		
Use of supplements	X		
Use of fodder preservatives	X		
<b>VII Transport and slaughter:</b>			
Transport distances and types	X		
Handling during transport		X	
Synthetic tranquilizers, stimulants	X		
Watering, feeding during transport	X		
Identification during transport	X		
Use of anaesthetics		X	

Shelter was partly accessible for animals as the technicians mentioned installations of fences and housing facilities for small stock as well as natural protection areas in Sipe Sipe. Farmers purchased animals mainly within the communities. They rather favoured adapted livestock purchasable in traditional markets than breeds from

commercial farms that show low performance in harsh environments. Multipurpose traits and adapted breeds are the main criteria for the farms' being analogue to the guideline. In these communities above 4,000 m.a.s.l., mainly camelids, sheep and some cattle represent the animal husbandry. The generally difficult production circumstances exclude the use of high performance non-adapted breeds. Therefore, conformity with the guidelines was confirmed.

The aspect of mutilations in Tapacari and Sipe Sipe was also valued as mostly compatible with international rules. Certainly, the farmers undertake mutilations like castrations and dehorning, allowed in the frame of the guidelines.

In Tapacari and Sipe Sipe disease measures are rather curative than preventive, displaying non-conformity to the legislation. The kinds of veterinary techniques and vaccinations applied differ largely according to the farmers' purchasing power, access to markets and services (VAN'T HOOFT 2004) and are assessed as more or less conform to the rules. The forage can be valued as organic because, according to the technicians, no fertilizers are used to improve the pasture sites. Additionally fodder is basically derived from the particular holding. The non-use of synthetic substances and growth promoters also complies with the requirements of the legislation. Feeding was assessed as more or less conform according to nutritional needs and an equilibrated forage composition because of deficiencies during dry season.

Assessments of the technicians concerning aspects of transport and slaughter turned out as more or less conform, besides the non-use of anaesthetics, the collective transport of animals of different species and further difficulties justified by the deficient infrastructure and absence of transport possibilities.

### **Magnitude, state, demand structure, possible prospects and extension activities in the organic livestock sector in Bolivia**

All of the 16 stakeholders valued the demand structure for organic livestock products as very low as well as the possible prospects and potentials for organic livestock husbandry in Bolivia. The responses for national and international markets were divided into high potential (0; 0 respectively), medium potential (0; 7), low potential (14; 5) and no statement (2; 4). Whether producers, which already certified their plant production had any access to extension referring to organic animal husbandry with possible prospects for certification was further investigated. The certifiers responded with yes (1), no (10) and no statement (5). According to the stakeholders, chances for organic products in general are located in the export and niche markets. A crucial point mentioned by several stakeholders was the problem of the required transparency and traceability in organic food markets, followed by substantial arguments for the class of consumers: higher prices for organic products versus cheap conventional products, and the lack of awareness about organic and alike livestock husbandry in Bolivia.

In Fig. 1, connections between different stakeholders active in organic and organic alike livestock husbandry are visualized. The graph structure is starting with a centred casket, from which the reader can follow different paths for different stakeholders. All the identified stakeholders involved are marked with white caskets. The dark-grey caskets outline background information for the different stakeholder, whereas the light-grey caskets describe interrelations between the respective actors. Further, information on product prices of the several production systems is added.

Certified organic livestock farming in Bolivia is currently nonexistent although there are "model farms" with potential for certification. Compared with numerous farmers, which certified their crop production for export markets, the organic-like livestock sector in Bolivia is dragging behind. Until today, there is a lack of an institutional framework stabilizing organic and traditional producers in Bolivia.

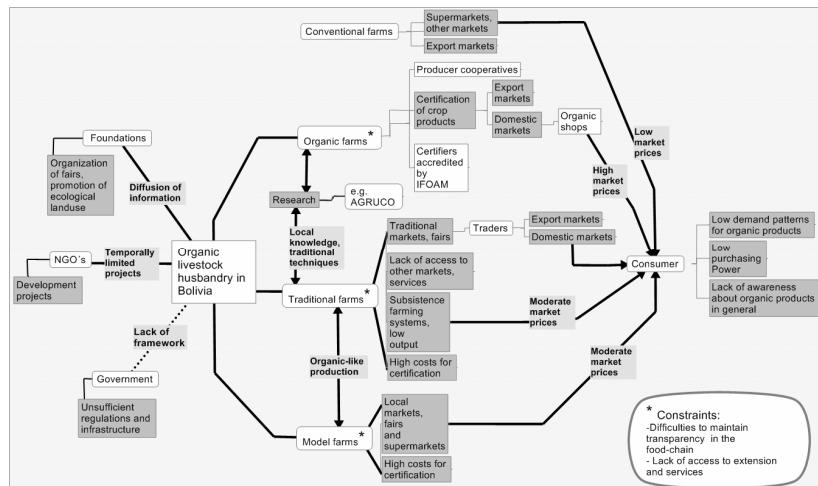


Fig. 1: Stakeholders and their interrelations with organic livestock husbandry in Bolivia.

Traditional systems show numerous intersections with guidelines of IFOAM. However, there are yet some differences between the underlying conceptual frameworks of traditional systems and formal certification processes. Whether adapting the rules to specific needs will be a beneficial path especially for traditional farmers constitutes an important aspect for future discussions about certification.

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