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# Scientometric and textual analysis explorations of alternative agricultures in the international scientific arena

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# Re-Inventing the Rural: Between the Social and the Natural

## Book Of Abstracts

XXIII ESRS Congress 17-21 August 2009 Vaasa Finland



*En fait, il a y a  
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Working group 2.6

## Conventionalisation? Organic farmers bite back!

Convenors:

Julien Blanc *Museum National d'Histoire Naturelle, France*  
Ika Darnhofer *BOKU Univ. of Natural Resources and Applied Life Sciences, Austria*  
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Authors:

Stéphane Bellon, Stanislas Poudou and Natacha Sautereau: Back to the future: long-term trajectories in organic farms in the south of France

André Blouet and Xavier Coquil: Organic matter management and self-sufficiency

María Carmen Cuéllar Padilla and Eduardo Sevilla Guzmán: The European certification system: Promoting conventionalisation by penalizing deep organic approaches

Ika Darnhofer: Organic farmers searching for alternatives to conventionalisation

Lucimar S. de Abreu, Stéphane Bellon and María de C. F. Alencar: Brazilian multifaceted ecologically-based agriculture: Between conventionalization and agroecological principles application

Jean-Luc Favreau, Mohamed Gafsi, Bernard Mondy and Agnès Terrieux: Strengthening the organic farming development: from the conventionalisation debate to the sustainable perspective

Heidrun Moschitz: Organic farming: An exclusive concept?

Matt Reed: The end of organic consumerism: Strategic changes in the organic movement?

Henrike Rieken and Hermann Boland: Converting to organic farming – Needs of eco-extension in Germany

Christopher Rosin and Hugh Campbell: Organification: *n.* the tendency to assume social and environmental orientations associated with organic production

Lee-Ann Sutherland: "Almost organic anyway?": Case studies of low input farming in the UK

Audrey Yankeerberghen: Belgian organic farmers' practices and perceptions between regulation, market and ethics

Lukas Zagata: Chicken à la organic: Case study on organic poultry production in the Czech Republic

## Back to the future: Long-term trajectories in organic farms in the south of France

Stéphane Bellon, Stanislas Poudou and Natacha Sautereau *Ecodéveloppement Unit, INRA Avignon, France*

Considering conventionalisation as a process, this work aims at characterizing the various evolutions patterns in organic farms. We assumed that the process, if present, should be visible at the time scale of a generation. Building on interviews conducted in the 1980s with early converters, we returned to the field and interviewed farmers on the same farmstead. The data was collected in the department of Drôme, South-Eastern France. The issue of conventionalisation is approached regarding autonomy (in terms of inputs and marketing outlets) and diversification (*versus* specialisation). Although we focused on technical changes at the farm level – i.e. choices and practices on crops, livestock, land and equipment – possible farm redesign were also addressed. Preliminary results show that farm trajectories differ significantly. Some of the farmers reproduced the mixed crop-livestock organic farming model, albeit with new equipment and market outlets, supported by networks and communication skills. In this case, autonomy is a key driver. Others followed regional production patterns in fruit production, with new technologies in orchard protection and diversification (crops or livestock). In another group, farmers appear highly adaptive, with major changes in terms of combination of activities, cultivated area, joint farming arrangements, and marketing. As a whole, change is on-going and farmers still have a range of projects. Over the time span of a generation, such changes cannot be reduced to conventionalisation. They also reveal internal capabilities and future directions for organic farming dynamics.

## Organic matter management and self-sufficiency

André Blouet and Xavier Coquil *SAD-ASTER, INRA Mirecourt, France*

In the ruminant livestock farms, profitability speaks in favour of a strong fodder self-sufficiency. This self-sufficiency seems easier to reach if the mixed farming system is diversified. However this requirement of self-sufficiency leads to a large share of forage crops (e.g., ley, leguminous meadows with seeds) in cropping plans and consequently leaves little place for cereals in straw. However, the straw resource is crucial to insure comfortable bedding for animals, and also for producing solid manure, which is often preferred to the liquid manure in organic farming. Where winters are long (4-months and more), the straw resource is often insufficient to provide the animal bedding. Organic stockbreeders thus ask their conventional neighbours to supply them with the straw that they are lacking. On the organic farms this imported, conventional straw is then transformed into manure, which is essential to ensure the organic fertility of soils and useful for the mineral fertilization of the crops. As the organic regulations authorize the use of this "biological fertilizer" since it is composted, we understand why the straw coming from conventional farms rarely returns to them. Such a use of the straw compromises the organic fertility of the conventional farms and thus leads to an ethical criticism of the practices of the biological farmers: can they leave it to the conventional farmers to produce a part of the resources they need according to modalities that their own regulations forbid?

### The European certification system: Promoting conventionalisation by penalizing deep organic approaches

María Carmen Cuéllar Padilla and Eduardo Sevilla Guzmán Córdoba University, Spain

The organic guarantee system established as compulsory in the EU is the third party certification, based on the annual examination of the farms by technical staff. In 2005, different organic groups of small and medium producers in Andalucía denounced some of the effects of this system. They reported that its structure of coas and bureaucracy was discouraging them to get officially certified, and pointed out that an alternative guarantee system was an urgently needed. We started a research project with these groups, analysing: a) the social dimension of the problems they were denouncing and of building an alternative guarantee system through a participatory process; b) the legal dimension, developing the options that this alternative system needed to have to be officially recognized; and c) the political dimension, analysing the participants' view of the organic producer and the power relations they aimed to change. We present some of the results of this project, focusing on how the European organic certification system penalizes small and medium producers, especially those who conceive of organic production in a holistic and comprehensive way. We analyse the points of view of these producers, who decided to work on the construction of an alternative guarantee system, to show how the official certification system promotes the conventionalisation of the organic sector. Our results show that the current system ignores and penalizes the possible transformative potential of the organic sector. Following this assertion, we argue that participatory guarantee systems are an instrument to support alternative patterns in the organic sector.

### Organic farmers searching for alternatives to conventionalisation

Ika Darnhofer BOKU – Univ. of Natural Resources and Applied Life Sciences, Austria

In the last 10 years there have been numerous publications on the 'conventionalisation' of organic farming. In many of these studies long marketing chains are identified as a key driver of conventionalisation. In these approaches the agency of farmers is often under-theorised. Farmers are pictured as passive and powerless, forced to comply with the demands of large processors and retailers. Some authors indicate that the only alternative is for organic farmers to engage in on-farm processing and direct marketing. However, this option is not open to all farmers as it is strongly dependent on the labour availability on-farm and the proximity of a consumer centre. Based on interviews and on discussions following presentations in front of farmers, I doubt that farmers are as powerless as they tend to be depicted by scientists. Either farmers are complicit, i.e. it suits them to streamline their farm, focus on the legal requirement for organic certification and sell to large retailers. Or the farmers are actively shaping their options, but in ways not captured by researchers. Indeed, organic farmers have several options to 'bite back': searching for an alternative individually, cooperating with neighbouring farms or becoming active in an association. The presentation will focus on approaches farmers have implemented to 'work around' the aspects of 'conventionalisation' that does not suit their understanding of organic farming, emphasizing the need to re-evaluate the heterogeneity of farms.

### Brazilian multifaceted ecologically-based agriculture: Between conventionalization and agroecological principles application

Lucimar S. de Abreu *Embrapa Environment, Brazil,*  
Stéphane Bellon *SAD EcoDevelopment Unit, INRA, France*  
Maria de C. F. Alencar *Embrapa Environment, Brazil*

In Brazil, recent legal changes have included several agricultural systems in the organic agriculture legislation, i.e., organic agriculture *per se*, biodynamic agriculture, permaculture, agroecology. However, some consider agroecology as being the umbrella for these ecological forms of agriculture, including organic agriculture. As a result, many initiatives were launched by various stakeholders: government institutions; research, training and extension organizations; NGOs or farmers groups. This debate illustrates the different interpretations of organic agriculture among farmers groups and researchers. Based on an analysis of documents (Brazilian congress proceedings and journal articles) as well as data from interviews, meetings and fairs, we analyse the current development of organic farming in Brazil. The conventionalization debate in Brazil is posed in specific terms, as organic agriculture is often interpreted as a method substituting conventional inputs and practices with alternative eligible practices. Other forms of agriculture are considered as genuine alternatives to conventional farming, i.e. based on redesigning farms and agroecosystems on the basis of new ecological processes. Organic agriculture is thus seen as favouring large scale producers, supermarkets (packaging enhancing visual quality of products) and export markets. As a whole, the discourse is not explicit in scientific publications, although the literature discussing the industrialization model of Brazilian agriculture is extensive. We conclude that in most cases research and field work does not address the development of organic agriculture in terms of conventionalisation, but as interpretations of organic agriculture and oppositions between alternative agricultural models.

### Strengthening the organic farming development: From the conventionalisation debate to the sustainable perspective

Jean-Luc Favreat, Mohamed Gaïsi, Bernard Mondy and Agnès Terrieux *UMR Dynamiques Rurales, ENFA, France*

The current debate about conventionalisation thesis of organic farming reminds us of the importance of values and principles which are behind this type of agriculture: the search for a coherence connecting agricultural production, ecological management, ethics, and public health. But to address the topic of conventionalisation through the general principles of organic farming and its founders' intentions might put us at risk of being restricted to a narrow framework and thus missing important points of the debate. To avoid this risk, we suggest using a notion whose principles and objectives are close to those of organic farming, yet more global: sustainability. Rather than creating new indicators to estimate the conventionalisation, we assess the sustainability of farms committed to different degrees in the process of conventionalisation and compare them to others, which are using pioneering organic farming methods. To do this, we built and used an indicator system adapted to the specificities of organic farming. Results show various forms of sustainability, closely related to the forms of entrepreneurial farms and the ways they mobilize economic, social or natural capitals. This is illustrated by case studies of farms of the Region Midi-Pyrenees, in south-west of France.

### From local to global: Mapping alternative agricultures' networks

Christian Deverre *INRA, Ecodéveloppement, France*

Most movements and organizations claiming for designing sustainable farming systems stress on the need to break off the homogenization of industrial agricultural practices and to steadily take into account local environmental, social and economic conditions. Rural sociology studies therefore are increasingly focusing on local innovation processes and community initiatives such as local agri-food systems. In the meantime, seeking scientific and social legitimacies as well as financial support, many of these movements are organizing themselves through networks whose extension often reaches the international level.

The paper presents several cases of such networks ("ecoagriculture", permaculture, agro-ecology...), including heterogeneous actors like farmers' organizations, communities, scientific and extension institutions, financing bodies, public services. It afterwards intends to characterize the contrasted features of their expansion, basing on the concept of "dispositif" according to Michel Foucault. It points out the fact that these differences are not significantly based on opposite scientific approaches (they have a common interest on soil biology, biological control of fertility and pests, sober use of local natural resources...), but rather on the way they establish links between selected actors and specific social and political goals (such as poverty reduction and nature protection, autonomy and resistance to the corporate system, conservation of local resources and local food traditions...).

### Compared trajectories of agro-ecology in Brazil and France: The role of scientists and social movements

Claire Lamine *INRA, France*  
Lucimar de Abreu Santiago *Embrapa, Brazil*

In Brazil, various forms of "alternative agricultures", aimed at opposing the modern technological standards and their impacts in terms of social exclusion for small sized family farms, and supported by NGOs from the 1970s on, progressively gathered under the denomination of agro-ecology, in a context where certified and institutionalised organic agriculture was not very present at the scale of the country. In France, several social and professional movements started quite recently to put agro-ecology on the foreground, in a context where, as opposed to Brazil, certified and institutionalised organic agriculture is quite structured. Our analysis of the Brazilian case is focused on the interactions between scientists, social movements and policy makers, analysed through the study of a dozen key actors' trajectories which show how some persons went from a strong involvement in NGOs (from the 1970s to the 1990s) towards participation in the construction of new public policies (from 2003 on), and often turned to research in order to legitimate their position. Meanwhile some public researchers turned to more participative methods and sometimes also to policy making, while others deal with agro-ecology in a more classical way in their own discipline. Such interactions and distinct trajectories generate competing versions of agro-ecology which we will distinguish on the basis of three main aspects: the conceptions of technical transitions, the type of farmers that are aimed at, and the relationships to the market and to the consumers. These differences, which can be related to both competing theoretical sources and specific socio-professional trajectories, could help analysing the case of agro-ecology in France in the next step of our common research program. We would study the apparition of agro-ecology— which seems more recent, except for a few pioneers - in two contrasted contexts: alternative food networks involving producers and consumers, partly as the result of a strong criticism of institutionalised organic agriculture, and sustainable agriculture movements based on more mainstream farms and productions such as arable crops.

### Scientometric and textual analysis explorations of alternative agricultures in the international scientific arena

Guillaume Ollivier *INRA and AMANDES.TXT, France*  
Stéphane Bellon *INRA, Ecodéveloppement, France*

The contestation of mainstream agriculture is not new. From "Silent Spring" to the 2008 "Struggle for Food", agriculture is continuously questioned to such an extent that we lately assist to the profusion of expressions requalifying agriculture. These propositions are more or less radical and/or intellectually structured reforms, forming thus Foucauldian "regimes of practices" or Kuhnian paradigms. Some typologies of agriculture exist coming from different disciplinary points of view. We propose here the use of textual and scientometric analysis to position and clarify the different Agriculture conceptions as they emerge in the scientific arena.

In the first part of this work, we propose to identify the diverse qualifications of agriculture built in the scientific arena. What are these qualifications and the fixed expressions translating such intellectual constructions? What is the dynamic of Agriculture deconstruction and reconstruction since the seventies? What is the overall qualification dynamic? What are the main significant conceptions on the numeric and intellectual points of view?

In the second part, we compare the institutional and cognitive attachments of these alternative conceptions of agriculture in the scientific arena. Are they generating distinct epistemic communities? What are they sharing and what divides them? What are their characteristics and specificities on the disciplinary, institutional, geographical and thematic points of view?

This work contributes at once to alternative Agricultures knowledge and to paradigm detection and characterisation methodologies in scientometrics and STS fields.

### The implementation of integrated fruit production in Switzerland

Réjane Paratte *INRA, Ecodéveloppement, France*

With the synthetic pesticides available on the market after the Second World War, many farmers and researchers hoped to solve their problems of pests and disease. However, the proliferation of new pests and environmental problems arose quickly. Some researchers looked for solution in reducing chemicals, while respecting or strengthening ecological regulations. This new approach, called integrated production, differs in its definition and implementation, according to the countries. The case of Switzerland is interesting, as 98% of its agriculture respects the integrated production guidelines.

We examine how integrated fruit production (IFP) has evolved in this country: its origin, the driving forces that led to its generalisation and the consequences of its institutionalisation. This work, based on interviews with the main actors of this process and on text analysis, has shown three periods in the implementation of IFP. From the 1950s to the 1970s, IFP was mainly an agricultural issue. In the 1970s, the biggest Swiss supermarket started its own IFP label. In the 1990s, the government, environmental and consumer NGOs got involved in the draft of the new integrated production guidelines. Through a popular vote in 1996, the citizens legitimated the integrated production, which became the minimum ecological requirements to obtain government subsidies. This situation led to the generalisation of IFP, but also to a loss of motivation of the growers for improving their practices by themselves, as they had done in the two first periods. In recent years, environmental NGOs require more biodiversity in agriculture, while supermarkets and consumers raise questions about multiple residues. What role will the grower organisations fill in this tightening of the rules?