



Intermediary report - January 2003

HOW CAN ORGANIC FARMING CONTRIBUTE TO SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS?

CP-19 FUL – RUG – CRAGx

SPSD II



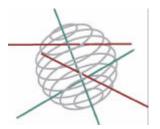
PART 1
SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS





This research project is realised within the framework of the Scientific support plan for a sustainable development policy (SPSD II)

Part I "Sustainable production and consumption patterns"



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HOW CAN ORGANIC FARMING CONTRIBUTE TO SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS?

Scientific report 2002

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1 Project Title

How can organic farming contribute to sustainable production and consumption patterns?

2 Introduction

Motivations

Following the various crises that 'conventional' livestock farming systems have gone through, consumers, who are increasingly distrustful and worried, are turning to alternative systems, especially organic farming. The public authorities have set in their federal sustainable development plan a target of converting 10% of the country's usable agricultural area to organic farming by 2010. However, the sustainability of this production system remains to be validated, for while in some areas it seems to offer truly novel responses (for the environment), its strong growth is a true challenge for the stabilisation of a series of elements. The trust that organic farming seems to enjoy is not safe from the recurrent crises that have struck the agri-food sector; its regulation and the organisation of the marketing of its products are subject to the pressure of a demand that exceeds the Belgian supply; and finally, the current scheme of technical supervision appears to be poorly suited to its needs.

Objectives

The project's overall objective is to define the sustainability of organic agriculture based on three two-part dimensions that must be confronted with each other and balanced, namely,

- economic sustainability: competitive position and potential for development,
- environmental sustainability: reproduction of resources and balance of specific externalities; and
- social sustainability: innovative abilities and social/territorial externalities.

These dimensions must be evaluated, matched up with effective sets of references, and backed up by policy instruments.

This makes it possible to define the research's specific aims:

- 1. To establish <u>technical</u> references for the two major stakes linked to the organic ranching and fattening of cattle, namely, rations and health. That entails making use of/improving the <u>positive</u> externalities of organic cattle ranching schemes (nitrogen balance, biodiversity) and analysing their environmental and social costs.
- 2. To study and test the <u>organisational forms</u> that permit negotiation between marketing requirements and the dimensions of sustainability and to reinforce the <u>guarantees</u> that the various production and processing networks appear to give consumers.
- 3. To analyse <u>consumer demand</u> and the most suitable communication tools and to initiate a participatory and experimental approach to negotiation.

Methods

The originality of this project lies in the fact that it allows for the interdependence of these three specific aims whilst trying to develop at the same time and in a coordinated fashion various types of sets of references and tools through **intervention-research** (Sébillotte, 2000; Hatchuel, 1999). The main hypothesis is the validity of a knowledge co-generation model through the interactions of all of the stakeholders and who can be represented in the research process in different ways. This research thus also aspires to explore and validate an intervention-research model that might be transposed to other areas. The idea is to validate the usefulness of establishing connections amongst consumption, production, and communication in the research itself. This is thus a multidisciplinary approach that strives to coordinate the work of engineers, sociologists, and economists on the one

hand, but also that of the farmers, processors, and distributors on the other hand, by the reciprocal influences of the research concepts, priorities and tools, rather than their simple juxtaposition. The approach belongs to an original epistemology (Hatchuel, 1999) that is centred on transformation rather than mere observation so as to give priority to reflexivity, and that is based less on established values than on the restatement (or regeneration) of values.

Expected outcomes

The project will produce sets of references in terms of production systems, organisational models, and the construction of the demand. The sets of references' feasibility will be validated in the networks (sector subsystems) that we test. Sustainability will be validated from the economic, social, and environmental standpoints. In addition, the research will determine to what extent the general organisation and negotiating schemes that exist in the organic farming networks can be transformed into new forms of collectives that can allow better for and organise the various dimensions of sustainable development.

3 Detailed description of the scientific methodology

This project thus has two types of objective set contractually by the commissioning party and that will have to be assessed at the end of the research. These are the production of reference frameworks and the development of an intervention-research method, with the two sets of objectives being intimately linked. In later sections of the interim report we shall describe how the methodology has influenced the generation of results. We shall thus content ourselves here with giving a brief description of our intervention-research method.

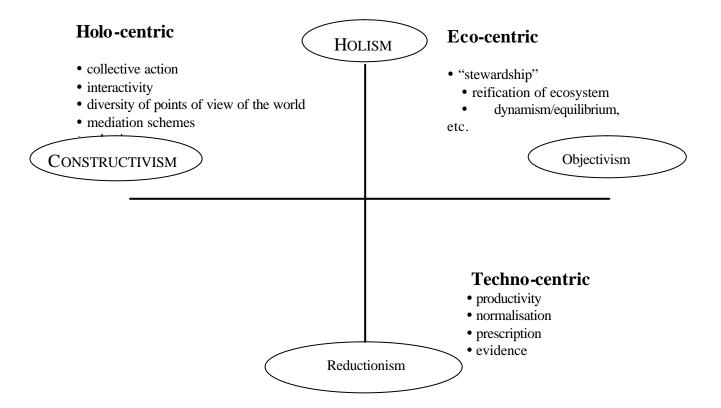
3.1 What is intervention-research?

Intervention-research is a collective learning process that postulates that the generation of knowledge and forging of relationships are indissociable. In other words, there is a direct connection between the types of attitudes taken by researchers, the ways that knowledge is produced and the knowledge that results therefrom. The set of diverse partners combines with the set of diverse research attitudes, but this apparent difficulty actually leads to the production of operating schemes, that is to say schemes that include both knowledge and action. A method exists, but not necessarily pre-programmed results. Such a process assumes that cross-learning goes on amongst all of the participants. (Hatchuel, 2000).

3.2 Choice of a point of view

The research approach, if we accept to enter the complexity of a question, will determine the questions that are chosen as being relevant to the purpose of the research. The way that this relevance is established will vary with the point of view adopted, that is to say, the knowledge-generating model to which one refers. To illustrate the difference created by the point of view, we can take the model of sustainable development applied to the notion of agricultural production systems that Bawden (1997) developed. In the following figure, the vertical axis goes from reductive world visions at the bottom to holistic world visions at the top, whilst the horizontal axis goes from an objectivist vision of the world on the right to a constructivist vision of the world on the left. Bawden then defines the four quadrants of the graph as reflecting a techno-centric attitude (bottom right), an eco-centric attitude (upper right) and a holistic attitude (upper left).

Figure 1: Intervention-research – developing a holistic point of view



Each of these three quadrants corresponds to a knowledge generation model. These models are not mutually exclusive, but correspond to different rationales that we have to define to avoid controversies that fail to allow for these changes in the ways that knowledge is generated. The techno-centric quadrant is centred on techniques and technology as the way to develop nature. It is characterised by the notion of objectivity: complexity is reduced to variables about which the research makes hypotheses that are tested in experiments that yield the truth. In this quadrant, results are considered all the more objective if one has been able to isolate the experiments from interference from the outside world. That is why this is called the laboratory model. The ecocentric quadrant reflects more the ecological point of view or certain economic models. Rather than striving for productivity, one seeks to keep the processes intact. It is not things' objectivity that counts, but their fitting together in a well-knit whole or, in other words, the relevance of the identified interactions between elements. There is no longer one truth, but more or less complete knowledge about the complexity of the world and thus uncertainty. One goes from the experimenting of the laboratory model to the observation of the field model. The holistic quadrant is that of the point of view that gives priority to social interactions, one that looks for what interests people and enables them to connect themselves to the world as they see it and thus know it. In this model, a diversity of points of view of the world cannot be avoided. It is a world of cohesiveness, but not necessarily of

objectivity. Once you accept that there is a diversity of points of view and each of them is relevant to those who hold and express that point of view, then there are many truths.

In going from the techno-centric to the eco- and then holo-centric models you gain in reflexivity, which allows better for long-term developments. This is the perspective that we have adopted. Careful! It is not a matter of saying that one point of view is better than or more scientific than another one, but of stressing the fact that you cannot use just any point of view indiscriminately to meet different objectives and each of the points of view has its own rules that must be observed. That is the criterion of scientificness (Hubert, 2002). This holo-centric approach was entrusted to a network (according to the terms set by the OSTC), the backbone of which consisted of a laboratory for the study of agrarian systems (CRAGx) and a laboratory for the socio-economic study of the environment and development (FUL), that made use of the continuous interactions between the agricultural scientist and sociologist who were recruited by the project. As of 2003 this team will be enriched by the expertise of economists from Ghent (RUG). The drafting of the questions that this research team will use is being steered by bodies on two levels, the Users' Committee and Competency Groups, which we shall come back to later.

4 Description of the mid-term results, preliminary conclusions and recommendations

4.1 Changes in the organic agriculture production and consumption context

Generally speaking, the organic produce market is at a turning point. After the boom that was linked to the successive crises that swept the food market in 1999-2001 and during which the Belgian organic produce market had one of the highest growth rates in Europe, there has been a certain downturn on the market since 2001. This has been reflected in situations ranging from a slump for certain commodities to regression of the most sensitive products, such as meat. The double-digit growth that marked the organic produce market in 2000 led to the major food chains' massive entry onto the organic marketplace. In terms of development, they crossed the symbolic threshold of a 50% market share for the entire organic sector. This development, which can be seen as a lengthening of the production and distribution chains, resulted in new stakes for the organic sector. The large food chains' entry onto the organic market effectively changed the initial contracts on which the sector's development had been based until then. Organic agriculture was initially built on contracts between a profession (organic farmers) and consumers. Today, it seems to us that the stakes of this reorganisation of the sector are located on four levels, to wit:

- the switch from a means obligation set by regulations to control of results;
- the construction of credibility that cannot be limited to the smooth functioning of certification schemes;
- the regrouping of the supply and organisation of processing structures to meet major distributors' requirements; and
- the opening up of the market, linked in particular to the European Union's recognition of organic products and the European Union's enlargement (European regulation).

Against the backdrop of these new challenges, Belgium has set itself the objective of reconverting 10% of its farmland by 2010 (this goal is enshrined in the federal sustainable development plan). At the end of 2001 the reconverted acreage totalled only 22,410 ha or 1.6% of the country's farmland,

or 694 farmers, for the entire country. This situation reflects very different regional trends. The bulk of the reconverted acreage (82%) is located in Wallonia, but when it comes to reconversion, and thus employment, the growth rate has been higher in recent years in Flanders (235 farmers), where reconversion has concerned primarily mixed cropping + dairy farming systems (80% of the acreage) and market gardening and orchards (20% of the acreage), involved small production units (17 ha) and been linked to the aid programme in close to 60% of the cases. The 18,384 hectares (2.4% of farmland) and 441 farmers (1.5% of the total) reconverted in Wallonia concerned dairy production and breeding farms (77% of the total) in which the animals are on pasture as opposed to being stabled (92% of the organic useable agricultural area), larger production units (42 ha on average) and a link to the aid programme that is close to 100%. This situation followed a period of intense reconversion from 1996 to 1999 (annual growth rate of 150%), which was linked to a combination of factors: the plummeting conventional beef and veal prices, successive food safety crises and official government recognition that materialised as measures to grant premiums in 1996. The reconversion rate started to bottom out in 2000. So, the reconversion rate was only 6% (in terms of acreage and numbers of holdings) in Wallonia between 1999 and 2002. This stagnation was linked to institutional uncertainty about the premiums' future, the wearing off of the crises' effects on consumers and the fact that the conventional sector started to take these crises into account.

The reconversions to organic farming concerning grazing animals (77% of the production units and 92% of the acreage) and pastures (88% of the acreage) are proportionately greater than in the conventional sector (+40%). The weight of the pasture-based systems in these reconversions is explained by the importance of the aid for pastures – the only true incentive for change -, relative technical and financial ease of converting to grazing systems and the added values obtained when the products are marketed (+25% for milk and +35% for meat). This preponderance is also reflected in the geographic distribution of the organic production units, for more than 80% of the organic farms are located in Luxembourg Province and the parts of Liège and Namur Provinces in which grasslands are concentrated.

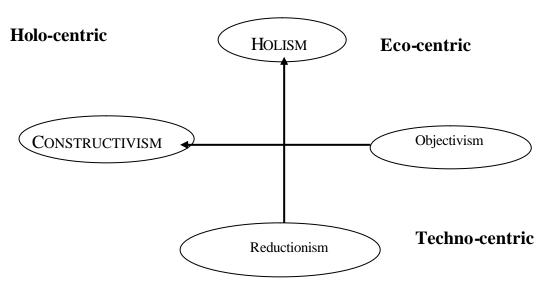
Almost all of the organic beef and veal sold in Belgium comes from Wallonia. Seventy-five percent of the carcasses put on the market are sold in large food chains' outlets, where the meat is pre-wrapped under controlled atmospheric conditions. Delhaize has the lion's share, with more than 60% of the organic beef and veal sales, followed by Carrefour Belgium with about 30%. The other food chains' involvement in the market is marginal. The remaining approximately 25% of the carcasses marketed in the country are divided relatively equally amongst the following outlets: organic butcher's shops that cut the meat to customers' specifications (about ten such outlets in Belgium), vacuum-packed pre-wrapped cuts in specialised organic food shops (160 POS), public and private institutions, and processors. Sales of meat cut to order thus currently make up only 7% of the current market, which is not without creating problems. Not included in the statistics are an additional 5 to 10% of direct sales. In addition, a classic problem in the meat sector is that of finding outlets for the less choice parts. Several solutions are being tried out right now, *i.e.*, delicatessens, communities and collective kitchens, etc. When it comes to the production-processing-distribution chains, two of them alone account for more than 90% of the organic beef and veal sold in Belgium, namely, the limited-liability cooperative *Groupement Viande Bio d'Origine Belge* (GVBOV),

which is the Delhaize group's exclusive supplier, and Moussoux, which supplies Carrefour Belgium and other chains and specialised shops.

4.2 A research approach: Deconstructing the problems to structure them

The weakness of the project's starting situation is something that can become its strength, namely, the fact that it was designed without referring to any specific turf. Under the general methodology outlined in Section 3, we refused to formulate starting hypotheses. Rather, we drew up a list of the areas to connect (production systems, organisation of the markets and consumption), complete with the competencies and areas of expertise represented in the research team. We consequently were not situated in the technocentric quadrant proposed by Bawden. On the contrary, we opted for complexity. This means that the research team focused its efforts on a double displacement on Bawden's graph: a slide towards system complexity along the reductionism-holism axis and a slide towards multiple worlds on the objectivism-constructivism axis.

Figure 2: Shifting the point of view towards complexity



This double displacement was predicated by the hypothesis that we were dealing with a complex problem that involved different world visions and incomplete, fragmented, controversial knowledge. This hypothesis came out of work that was conducted prior to the OSTC's call for research proposals and involved a series of initial concerns, the contours of which could be plotted along three axes, as follows:

- a '<u>definition of organic</u>' axis: Type of conversion with regard to production and a blurred, even contradictory, representation of the notion among consumers;
- a 'diversity of the players' ways of thinking' axis: organisational choices, credibility networks; and
- a 'product qualification' axis and the need to forge relations based on a tension between the obligation of obligations (imposed by law) and control over results, which is a particularly pertinent question in unstable cases such as beef and veal.

In this type of holo-centric scheme, the values that underlie the reasoning that is put forward are challenged in treating the problems. The situation that some parties consider to be a problem refers

to more general implicit or explicit considerations, the statements of which must be analysed in connection with the values and controversies involved. In changing these value or knowledge systems it is possible to change the problem or ascertain that the problem is no longer relevant. This is what we shall call a 'reactive point of view' or a point of view that has been informed by feedback. With regard to organic beef and veal, the problem is a complex one that concerns both the consumer's representations of matters, judgements about the type of reconversion in which producers engage, producers' relations with mass distribution chains, etc. Changing the ways consumers see things, for example, makes it possible to restate the problem and thus change the point of view. Handling such a diversity of opinions and factors must be done in two steps: First one must cut links in order to render the various points of view explicit and reveal what we call the diversity of worlds involved; then one can reconnect the pieces around a mobilising plan that can allow for the heterogeneity that the first step revealed and state a question that has been stabilised according to one point of view. That is what we call defining an intermediate action concept. We shall now describe these two steps of dis- and reconnection.

Allowing for the diversity of the worlds involved requires the researchers to be able both to identify, render explicit and subject the knowledge that is in play to discuss and to reveal the diversity of the players' plans, in more general terms, along with their implicit or explicit consequences on what is advisable for the entire community. When it comes to the examples of the know-how and abilities of meat processors, the controversy can concern both how to cut up the cattle carcasses and the value of the products that are delivered. So, Belgian butchers will defend the so-called 'anatomic' butchering scheme for double-muscled beef cattle such as the Belgian Blue and emphasise the leanness, tenderness and light colour of the cuts, whereas their French colleagues, who butcher Limousin carcasses, can insist on their ability to 'extend the cuts towards the forequarters' in order to showcase the characteristics of this breed's darker, more marbled meat. This shows us that stating the 'how to cut cattle carcasses' problem is not a subject of consensus. Its complexity calls for deconstructing the problem to determine what makes it a problem. The schemes that are capable of handling such problematic subjects rely on interactive modes that vary with each player's involvement and type of legitimacy.

We have made a distinction between 'involved players' and 'affected players' (Grin, 1997). Involved players are those that are concerned by the activities put into effect. They are the various market 'operators' (feed manufacturers, breeders and finishers, processors and distributors) but also the supervisory structures (advisers, consultants, researchers, etc.). All of these parties play active roles in the markets' organisation. The affected players play an indirect, rather than direct, role in the market's organisation, through their reactions to the choices that are made. They are the consumers, the people, and the people's spokespeople. However, the need for cognitive diversity prompts us to make a second distinction between 'stakeholders' and 'institutional representatives' (Bertrand *et al.*, 1997). The institutional representatives (trade union representatives, association representatives, etc.) can judge the legitimacy of a problem and use their specific powers and expertise, but their positions, once constructed, are difficult to revise. The stakeholders, in contrast, get their legitimacy from their direct holds on the players and the constraints with which they must work. They thus take stands that are based on their potentially revisable visions of the world. We thus constructed our research design to allow for this double divide, *i.e.*, stakeholders/representatives and involved/affected players, in exploring the interactions between players.

Table 1: The research design, bodies and types of player

Type of player and body	Involved	Affected	
Stakeholder			
	- Producers	-Consumers	
Competency groups	- Processors (butchers)	-Environments	
	- Distributors		
	- Researchers		
Specific groups	- Decentralised public meeting	- Decentralised focus groups	
	of producers (organic breeders)		
Representatives	Producers' trade organisations	~	
	(UNAB, FWA)	(CRIOC, Nature et Progrès)	
	Certification (Ecocert,	E	
Users Committee	Biogarantie)	(IEW)	
	Organic oversight (CEB)		
	Distributor (Fedis)		
	Farm Ministry (Walloon		
	Region):		

The research design, that is, the ways we have allowed for the connections amongst the various bodies versus knowledge generation and action, is what accounts for the particularity of the interactions organised by the research team. A brief description of the bodies' functions and compositions follows:

<u>The specific groups</u> are areas of interaction amongst the players and with the researchers that are limited to a specific category of players ('producers', 'consumers', etc.) They were set up to prepare for the work of the competency group, given that certain groups of players are so heterogeneous that preliminary work was necessary to connect the various world views before taking on the other groups of players in the competency groups.

The <u>competency groups</u> are composed of involved and affected stakeholders who have been chosen for their specific skills. Their tasks are to steer the handling of the problem concerned by the research project, that is to say, to keep track of developments and to stoke the problem's transformation. We have called these bodies 'competency groups' because we are trying to trigger the emergence of new community skills and competence through the work of such groups of competent individuals. Each competency group is organised around three axes of diversification of the world, namely,

-Place in the organic beef and veal market: Entering the market as a producer, distributor, consumer or processor gives rise to different types of concern.

-Type of talk about organic farming: Organic produce as a market or a commitment; conversion as a change or continuity; environmental justifications; credibility through certification or commitment.

-Talk concerning mass distribution and consumers: short or long stable-to-table chain; 'the consumer is king' or not totally competent; rapport between supermarkets and farmers.

The competency group will meet three times a year. Its aim is to go from a sum of individual competencies to a state of collective competence that is connected to the individual competencies.

The <u>Users Committee</u> is an institutional discussion forum. It is composed of the project's leaders and institutional representatives from the organic sector and beef chain. These users have the task of discussing the relevance and feasibility of the ongoing programme. The Users Committee does not make decisions about the project's the methodological choices and working party make-up. Rather, it makes proposals regarding the research questions and the research's configuration. A table has been attached to describe the research's current configuration.

The composition and configurations of these various bodies can change as the research questions change. If, for example, how to cut up a carcass becomes a key question, it is possible that a specific butchers' group will have to be set up. What conditions must be met to get the players interested in the collective bodies' work? On the one hand, the research team conducted some fifty semi-structured individual interviews in the course of the year. This more conventional method for social scientists and agricultural experts enabled us to delve deeper into a series of more specific aspects of various issues and clarify a lot of things before the research *per se* (see the document discussed in July 2002 (biod-01) in the competency group). On the other hand - and this, on the contrary, is specific to intervention research - the researchers must have specific competences when it comes to getting people interested and organising their discussions. How, indeed, does one get a group of parties with such apparently different interests as butchers, mass distribution chains, breeders, and consumers, to sit around the same table? How does one organise the discussion so that they forget their guild-like protective reflexes and agree to learn from each other? What have interactive schemes defined according to such principles taught us? What diversity of worlds have they enabled us to perceive?

4.3 The diversity of worlds

In this part we shall describe the diverse set of worlds that we saw coming out of the above-mentioned discussions. It should be remembered that this diversity is reflected in the parties' particular types of knowledge and competencies and their different values and plans. We examined this diversity from three angles or 'sections' of reality, namely, the type of conversion (production system), market model (organisation) and consumers' points of view. This somewhat artificial way of cutting up reality is nevertheless part of the deconstruction work to which we were committed methodologically in order to structure the research questions.

4.3.1 The diversity of the types of reconversion

The meeting of the internal driving forces (breeder's plan and his undertaking) and signals from the socio-economic environment in which the producer is located (market, premiums, and social

demand) reflects a heterogeneous collection of reconversion rationales and levels that can be diagrammed and described as follows:

Table 2: Types of reconversion versus internal and external dynamics

	Crises hitting	Support	Development of	Changes in social
External	conventional beef	programme	the organic	demand and
Signals	and veal	(organic farming	produce market	consumption
Breeder's		premiums)		
plan				
Declining		1° Financial		
agricultural	+++	opportunity		
activity		19% (1.1 LU)		
Livestock =				2 ° Environmental
auxiliary and/or	+	+++		reconversion
extensive				36% (1 LU)
Livestock =			3° Reconversion	
Develop	+++	+++	via the market	
product's			25% (1.6 LU)	
potential			,	
Search for new				4 ° Production model
coherence/consi	+++	+++	+++	reconversion
stency				20% (1.3 LU)

Financial opportunity: A temporary survival strategy

This concerns small holdings that are run by elderly farmers without heirs or engaged in a secondary activity. Larger entities that have been mismanaged into chronic financial difficulties are sometimes concerned, too. The reconversion is accepted if it does not involve major investments or technical overhauls. It is part of a survival strategy and its purpose is rarely to develop output. These systems are ultimately doomed to be absorbed by other, conventional, farms, unless the decision is taken to transform their production models.

Environmental reconversion: Developing the land more than the products

This concerns particularly extensive 'grass-only' livestock operations for which producing is not the main aim. On such farms, the professional activity is seen as a way to make use of the land, rather than developing a product. This is the case of 'premium hunters', for whom agricultural activity is the main thing and the result of calculations to optimise their premiums. This is also the case of landowners who are sensitive to environmental issues and for whom ranching provides an auxiliary income. Finally, this is the case of stockmen at loggerheads with intensive livestock raising and who are reconsidering their profession as breeder and ranchers as a way to produce environmental quality – a job for which they are paid – and weighing the objectives of quality of life against those

of profitability. The reconversion of the land is relatively easy, since this concerns only meadows and pastures. The reconversion of the stock involves a change of breed, which often precedes the land's reconversion in the case of landowners, is concomitant with the land's reconversion in the case of 'stockmen at loggerheads with the intensive system, and gradual, incomplete and reversible in the case of 'premium hunters'. The organic farming specifications are easy land management rules for these stockmen to observe and make them eligible for some aid. According to our estimates, 90% of the output – lean beef – goes into the conventional circuit.

Reconversion through the market: producing and selling a certified organic product

For such livestock farmers, developments in the agricultural and agri-food sector in general and the beef crisis in particular are opportunities to redefine their business plans and technical and economic orientations. Aware of the difficulties that the agricultural context holds out to them, they realise the need to go out and meet the market. The first steps in this direction usually precede the reconversion to organic agriculture, which is seen as a good way to develop their output, as a commercial opportunity. It is the meeting of organic agriculture and the rationale underpinning the business plan. To get products that meet both the specifications and demands from downstream, high technicity and far-reaching transformations are necessary. This means acquiring new skills and competence (nutrition and animal health), making appropriate technical and genetic choices, investing, etc. The farms are primarily engaged in breeding and fattening and concern 'specialised all-grass' systems or are combined with fodder production. The output is usually destined for long stable -to-table chains.

Reconversion of the production model: searching for coherence and consistency

In the wake of the process that led to environmental and economic reconversion and being remodelled by the professional practice of organic livestock farming and the changes that this has triggered in his understanding of his production system and the sector that enables him to develop its potential, the livestock farmer is encouraged to reconsider his undertaking and plans from a more comprehensive standpoint. He is no longer merely complying with specifications in order to sell his output, but is searching for coherence between economic and agricultural or environmental imperatives, between his produce and consumer demand, between the demands spelled out in the specifications and those issued by the downstream operators. We would more readily call such farmers, who are habitually called 'pioneers', innovative farmers. This search for coherence and consistency will embrace many areas of experimentation, such as 100% organic feed, feed selfsufficiency, livestock health, the introduction of range-fed cattle or new crops, the diversification of activities (cash crops, pigs or poultry, lodgings on the farm, etc.) and markets (production pools, short circuits, direct sales, etc.), and so on. The livestock farmers gradually come to see the specifications as being the normative translations of the principles to which they subscribe, rather than simple constraints. What is more, they will go farther in testing some points than strict observance of the rules requires.

Reconversion dynamics

This typology is admittedly sketchy. It enables us to identify the rationales behind reconversions ¹. but says nothing about their transformation in space and time. A breeder can thus switch from one rationale to another. Moreover, the reconversion period is one of the doorways to such transitions in time. The following diagram identifies in advance some pathways that seem to be central to the sector's evolution.

¹ Quantitative analysis of the figures shows us overall that, for the four conversion models, 65% of the dairy farms do not fatten ('finish') their animals and interfere little with the market (10% of the animals are sold mainly through the integration channel), 94% of the animals that are sold are finished on 35% of the farms, and only one-third of the animals raised according to organic farming specifications are sold as such, which leaves a theoretical growth margin for the market – without additional reconversions – of 200%. This margin is theroetical to the extent that the Type 1 reconversions (financial conversions) and Type 2 conversions (environmental conversions) have no market prospects, or at least not in the short run. If these farms are taken out of the picture, this potential growth rate falls to 100% and concerns 45% of livestock farmers.

Product Search for developemnt coherence Innovation Diversification **Profitability** Differentiation Reconversion of Reconversion Pasture by Sale the production Breed the market Transformation model Animal Autonomy health 100 % organic Credibility Diet Quality of Environmental Pasture Financial life reconversion Inspection? Pasture opportunity Breed? Development of land Survival strategy

Figure 3: Reconversion dynamics – the pathways between typologies

To conclude this analysis of production systems, we identified four major types of reconversion based on the plan or ambitions guiding the reconversion of the livestock farmer's production system. This plan or aim determines the degrees of reversibility, conformity with specifications, levels of environmental pressure, types of insertion in the market, relations with consumers and farm structure choices, which are all so many parameters of the reconversion's sustainability. Intervening in these specific plans, connecting them to group ambitions, and getting the involved and affected players into the act boil down to exploring how organic livestock raising can contribute to sustainable production and consumption patterns.

4.3.2 Diversity of production chain models

Just as we described the types of reconversion, we shall now give more detailed descriptions of the different organic beef processing and marketing organisation models. In so doing, we shall underline

the diversity of the worlds with regard to four questions, namely, 'Which of the initial conditions gave the decisive impetus to the production chains' development?' 'What competences are required and risks taken to develop them?' 'How is the consumer involved?' and 'What questions does the model raise in terms of sustainability?' We shall thus present in succession two long-chain models, *i.e.*, the integration model and the centralised collection or stockyard model. However, we shall then have to complete these descriptions with that of a third model from the short production chains, namely, the exploratory model².

4.3.2.1 The *integration* model

The integration model is driven in the beginning by the supply, that is to say, the livestock farmer or group of livestock farmers. It will gradually include the other functions down- and upstream from the production chain proper. The birth of this model is marked by a break with conventional production chains and a lasting conversion to organic farming. This break is reflected in a change in the cattle breed, with the Belgian Blue being abandoned in favour of hardier breeds such as the Limousin, Aquitaine Blonde, even the Angus or Salers. This change of breed entails a long-term commitment. This is important, for the conversion marks the start of a story that will found the identity of a plan or ambition, that is to say, a decision that will enable the farmer to set a course and choose a product based on longer-term projections of his situation.

The acquisition of competences is guided by the desire to be integrated into the system which, rather than delegating work to other 'links' in the chain, strives to integrate their various functions and competences by various means. This rationale corresponds to the gradual construction of a market with a network organisation: sales of meat packages on the farm and deliveries to private individuals, then the creation of butchering workshops, butcher's shops and deliveries to specialised organic food shops, and finally the development of the mass distribution market and commitment to an independent processing facility. This principal of the acquisition of competence is thus *vertical*. These vertical competences will have a feed-back effect on the finisher's trade by defining the characteristics sought in the initial product to process. These competences will also transform the integration of the model's hidden side, that is, the steps upstream from production, *i.e.*, various forms of specific contracts with feed manufacturers, constitution of genetic capital, and various degrees of integration in other production units. However, investing in a processing unit and taking over farms require the development of entrepreneurial risk-taking skills. This is important in the view of the players on the mass distribution scene.

Relations with consumers depend on the market. Labelled products, direct sales, specialised organic food shops and supermarkets differ on a number of scores, such as their packaging choices, brand names, etc. Schemes are implemented to maintain the dialogue with consumers and facilitate the clear statement of the farmers' aims (breed and long-term goals). This trend towards differentiation

² The use of this term 'production chain' or 'production sector' ('filière' in French) prompts us to make two remarks to deconstruct a concept that allows poorly for the key characteristics of the construction of a product's quality: (1) The use in the singular of terms referring to operators erases the heterogeneity of the players in each of these groups. (2) The very designation 'operator' masks the permeability between operators, between production chains and between products

is nevertheless challenged by the market strategy of dealing with supermarkets, which look for uniform products.

The model's sustainability rests upon its ability to foresee changes in consumer demand. This ability is based on clear plans and goals and real abilities to negotiate flexibly with the different representatives of the chain' different functions. Nevertheless, this finding is mitigated by the trend toward standardisation that is involved in choosing to work with supermarkets. Finally, the principle of integration raises a question of fairness in the relationship that is established between the driving force of integration (the finisher), who becomes a middleman in part, and the other livestock farmers.

4.3.2.2 Stockyard model

This model's organisation is based on the principal of demand-dependent delegation: producers organise the supply according to what the distribution sector asks of them. This comes under the development logic of a distribution chain that has adopted organic products as a strategic choice and consequently strives to have as many exclusive supply contracts as possible. Several levels are involved within a distribution chain, for the strategic choice is made by the management but implemented by the meat buyers working with conventional meat frameworks. The management thus is guided by long-term concerns and is concerned about the product's credibility as an answer to the many food crises that have occurred, whereas the meat buyers, who are more pragmatic, try to get the best deal under the conventional reference framework with which they are familiar. The food crises are decisive accelerating factors that in turn will interfere with a two-track plan.

Competencies are developed *horizontally*: their acquisition is guided by the stockyard mentality and the decision to stop at the slaughterhouse's door to delegate further responsibility to the processing and distribution links. They are concentrated on the production level: recruitment of breeders, selection of lean beef cattle, finishing advice, etc. This calls for supply management skills (bargaining over prices and organising and running the collection network). The system does not cover only the animals that meet the mass distribution circuit's specifications. On the contrary, the ability to find markets for the different types of stock is what links the breeder to the stockyard group.

The risk here lies in the heterogeneousness of the farmers participating in such stockyard schemes, just as <u>the</u> organic breeder does not exist in the singular, as the various types of reconversion have shown. This diversity refers back to the diversity of the individual plans and ambitions and the difficulty of bringing a plan that is shared amongst breeders to fruition within the stockyard group (in a crisis context), especially as the delegation of tasks to the processors – conventional operators, we might add – will in turn weaken the production chain's ability to make its own plans. Finally, and this is what makes the model both problematic but potentially innovative, the involvement of processors

with dubious reputations³ forces breeders to ally themselves with the mass distributors, provided that this *de facto* alliance undergoes collective debate.

From the farmers' point of view, the stockyard model's weak point is the lack of direct ties with consumers and consequently the need to work through a double layer of spokespeople, namely, the world of butchering, which defines things according to its own conventional reference framework (tenderness and leanness of the double-muscled Belgian Blue young bull's meat); and the food chain's management, which defines things according to its strategic choice in favour of organic produce. Given the lack of joint representation, the farmers can then adopt contradictory behaviours in this connection. Such contradictory actions reflect the tension surrounding the product caught between the organic production reference framework and the distributors' product reference framework.

The model's durability is contingent on the players' abilities to shift the subject of negotiations from prices to products. However, such negotiations cannot be effective if each group of operators is unaware of and lacks a clear understanding of the heterogeneity within the group. The principle of delegation also raises the question of the interactions that are indispensable for the players to make commitments to each other. In this model, the question of market access for farmers and for farmers and intermediaries and thus the issue of fairness are relevant.

4.3.2.3 The *exploratory* model

The exploratory model is an intermediate model, midway between the stockyard and integration models, that is characterised by flexibility and its ability to explore. It corresponds to short production chains that are differentiated yet maintain their independence and where the requirements of standardisation are much weaker than in the first two models we have examined.

The competences that are developed are vertical <u>and</u> horizontal. They are the abilities to 'travel' through the production chain according to unpredictable learning paths and to try to build a producers network that is compatible consumers' representations of the sector. This model is characterised by a search for the ability to recombine in many ways and to associate with various entities –something that is sometimes perceived as being ambiguous.

Relations with consumers are built through schemes that are founded on interpersonal relations. This means direct sales, cutting carcasses on demand, and being present in the marketplace. These rather informal schemes are very flexible and capable of testing, but rather willy-nilly, breeding or production system choices⁴. These choices are tested, that is to say, they are communicated and explained right down to the consumer's level, which makes it possible in return to interpret certain results. The corollaries of the uncodified, interpersonal natures of these arrangements are that the market develops slowly, by trial and error, and it becomes increasingly difficult to test things from

³ Because they try to obstruct attempts to coordinate things, have strategies of getting around the specifications, or have been found by the certifying body to be involved in outright fraud.

^{• &}lt;sup>4</sup> Organisation of 'Limousin' and 'Angus' weeks, testing the oxen, etc.

afar. All of the intermediate links must commit to the system - a requirement that raises problems when the market grows and the production chain lengthens.

The main problem in this model is the simultaneous development of horizontal and vertical competences, which can lead to the circulation and meeting of new consumer demands and production or processing innovations. Such development is slow, rather unsystematic and unforeseeable. However, we feel that it is important to underline the fact that, when dealing with a product that is marked by great uncertainty, the model gives up, in a way, the requirement of generality, because, given the scarcity of information about the product, searching for it systematically would be too expensive. This model tends more to place the product – that is to say, it circulates information about the product – in a more flexible, multipolar scheme that is built up over time.

Table 3: Three production chain models

Model	Integration	Collection	Exploratory	
Initial plan	Suppl Demand breed conversion get a jump on crisis	Supply Demand organic product range growth in times of crisis	Supply \top Demand get a jump on crisis	
Competences Market	- Vertical - Network-based market, differentiated	- Horizontal -Exclusive market, set prices	-Horizontal-vertical -Interpersonal market	
Risks	prices - Investments	- Heterogeneousness	- Ambiguity	
Consumers	Representation of organic consumers	- Isolated production chain, absence of producer- consumer relations	- Interpersonal experimenting	
Control Production chain	Shift towards processing, Standardisation?	Supermarket/producer negotiations Imposed or negotiated?	Innovation Slowness?	

4.3.3 Emerging consumer demands

To allow for the diversity of consumer worlds, we had to find a method that would be compatible with their status as affected, rather than involved, players. The method that we chose had to enable us to allow for emerging knowledge and values. But we first conducted a small survey to be able to develop a hypothesis concerning the directions that the changes in consumers' thinking were taking. We wanted to check, through a survey of restaurant owners (as the group that sets gastronomic norms), the hypothesis that the standard product that we find on the Belgian market, *i.e.*, double-muscled Belgian Blue, was problematic from a strictly gastronomic point of view. The survey revealed, just for information's sake, that the more exlusive the restaurant, the more problematic Belgian Blue meat became, and the more new or novel products were tried and validated by the chefs (Annex 2).

The research design that we subsequently settled upon, that of decentralised focus groups, was aimed not at getting a quantitative picture of the issue, profiles and typologies, but, on the contrary, seeing how consumers who interact with each other can give rise to new questions. This approach, which relies on interactions within a discussion or focus group, enables the participants themselves, in asking each other questions, to replace the interviewer, at least partially. The result is that the points of view of affected players are taken into account better (Morgan, 1988). This is the perspective that led us to set up three focus groups, composed of supermarket chain patrons

(shoppers at Delhaize Le Lion and Carrefour) from Arlon, Namur and Mons in late November and early December 2002. The data are currently being analysed. Nevertheless, based on the early findings we can already mention a series of hypotheses on which we shall be able to back up our intermediate action concept (Annex 3).

- We observed what we have called 'generations of eaters' or 'eating generations' and, amongst
 them, the onset of a new generation of experimenters who belong to the major trend of reduced
 meat consumption (for reasons of subscribing to vegetarianism and animal welfare) and
 increased demands when it comes to consuming such products.
- When it comes to production systems, the participants spontaneously and collectively brought up the matter of animals' diets as being relevant (in the wake of the various crises). They also considered the changing of breeds to be relevant. Such breed changes are meaningful as marking a general change, despite their lack of competence in this domain.
- Animal welfare was a point of convergence amongst the eating generations, which could nevertheless hold diametrically opposing views on the matter of breeds (the preceding point), *i.e.*, their positions with regard to the Belgian Blue. The issue of animal welfare was approached via environmental considerations and the matter of grazing, with being kept in stalls seen to be a violation of animal welfare.
- The issues of the environment and organic farming were weakly structured and absent from the discussions. We must point out that in these focus groups, only two of the ten people in each group were occasional consumers of organic produce. The general feeling was that organic farming did not exist or else it was strongly denounced ("the certifying agencies and producers are deceiving consumers"). Finally, the three groups had markedly different collective competencies that revealed, depending on the specific competence involved, different learning abilities.

4.4 Production of an intermediate action concept

How can we reconnect the observed diversity of views? In intervention research, the gradual connections that are made between the different worlds and getting them to fit together is achieved by the construction of intermediate stages. The latter proved to be crucial for getting the various players to come together and gradually agree on the common wording of a problem. The quality of the partners' interactions depends on the relevance and rigorousness of these intermediate stages' construction.

New forms of collaboration are forming around socio-technical objects that we can call intermediate objects, to the extent that they connect heterogeneous worlds (diversity of players and notions of the world) and mark successive stages in a collective plan or ambition (Vinck, 1999). These intermediate objects can then take different forms: specifications, action plans, codes of good practice, etc. In our case, the intermediate object must be able to reflect the action plan (tasks) that we shall describe briefly in Section 5 of this report, to conclude.

To enable the players to see themselves as taking part in collective action, these intermediate objects must be both *stylised*, that is to say, a simplified representation of them must be produced to enable the players to grasp them, and *conceptualised*, so as to enable the players to share the common purposes that will give access to the transformation of their environment and fulfilment of their plans

(Hubert *et al.*, 2000). We shall call this conceptualisation operation the development of an *intermediate action concept*. We shall use the term *intermediate plan* to refer to all that enables the players to see themselves as taking part in collective action, that is to say, the stylisation and conceptualisation of the intermediate objects, as well as their practical consequences, *i.e.*, the descriptions of the scenarios in which the players may decide to take part.

4.4.1 Stylising

Stylisation may be done by stabilising a statement or slogan that has the ability to mobilise heterogeneous groups of players. The stylisation exercise offers a way to test the mobilising powers of certain questions and issues. We were able to test the mobilising powers of different wordings and statements in the course of town meetings that we held with farmers, as well as on our Users Committee. We currently propose the following statement as a working hypothesis:

Daring to look the consumer straight in the eye⁵

This statement is an organising principle that defines the place where one looks. It can tie producers' and consumers' very heterogeneous initial concerns together. It is a definite wager, in that we have deliberately chosen to measure first its ability to mobilise those whose talk is the least connected to the problem.

'Looking at the consumer' means that you know where and at whom to look. This means – and we felt this need in all of our meetings with producers – the need to start by <u>building a representation</u> of the consumer specifically with regard to organic produce. This is a plural and incompletely competent representation of the consumer with regard to a product that is hard to qualify, but the sense of which can enable him to be in a different space time from that of the 'here and now' that characterises generic supermarket products. This means that producers and developers have to develop their abilities to show what organic farming means in terms of credibility, well-being, animal welfare, etc.

'Daring' means that those who look at each other agree to discuss the implicit questions that have not been covered collectively. 'Daring' also means that you agree to lower your guard, at least partially, in order to learn from the other and give the other party access to your own knowledge. This means that the research protocol has the abilities to produce the conditions necessary to make all this explicit, *i.e.*, relations of trust and protection (confidentiality) in these discussion forums. This can also lead to changes in the ways consumers look at the farmer's trade: a kindly gaze that places agriculture in the position of a victim that would otherwise carry the risk of reducing farmers to powerlessness.

'Looking straight in the eye' means that you accept to open your eyes to current developments in the sector and bear the consequences of the longer production chains when it comes to the cutting of the contractual ties that used to link producers and consumers and credibility in the face of the

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⁵ This statement was proposed and declined during a public meeting between organic cattle farmers and researchers.

threats that are linked to increasingly complex production chains and the entry of conventional intermediaries in the circuit. It also means accepting to look at the potential contradictions between the definition of organic produce and what the supermarkets expect from them.

'The consumer' also means for us researchers that you agree to field questions from citizens cum consumers, who will one day wonder about the legitimacy of reconversion premiums and organic farming premiums. This means the need to agree to <u>validate the environmental justifications</u> that are attached to these premiums.

To act we nevertheless need to structure better this first statement, 'Daring to look the consumer straight in the eye'. This structuring or conceptualisation must enable us to affirm both the framework of possible commitments and the consistency that makes it possible for the diverse group of possible commitments to hang together.

4.4.2 Conceptualising: an intermediate action concept

The intermediate action concept that we are going to describe is on the drawing board. However, we feel it would be useful to describe it as an interim research outcome, for it enables one to see what it includes and excludes at this point in the research and to examine to what extent it complies with the normative framework of sustainable development as imposed on us by the OSTC programme. To describe this concept we shall start with a stake that seems to concern all of the players that we have identified, at least at this stage in the game, namely, strategies for circumventing four points in the organic produce specifications. This stake is the entryway into the action concept; it is what makes it possible to define a handle that all of the players can potentially grab onto due to the force of the challenges that it issues and the embarrassment that making it explicit creates amongst the players themselves. Once this handle has been defined, we can enter the concept itself by exploring the various areas of action that it embraces and the knowledge-generating possibilities that the latter offer. We shall thus visit the three possible areas for action, or three debating halls, that correspond to the three types of tension covered by the concept, namely,

- the tension between the production reference framework and the product's reference framework:
- the tension between the production reference framework and the consumer's reference framework; and
- the tension between the product's reference framework and the consumer's reference framework.

This 'tour of the property' will reveal the absence of a fourth 'debating hall', that which concerns the connections between these three 'discussion rooms' and environmental issues.

4.4.2.1 An unstated but shared stake

Knowledge of the organic sector and work in the field have enabled us to identify a series of points in current organic beef raising specifications that are difficult to meet, especially for those who work with long production chains. They are:

1) complying with the 20% ceiling on births by caesarean section per year;

- 2) complying with the stipulations on the use of therapeutic means to ensure the animals' health:
- 3) complying with the three-month limit on housing in free-stall barns; and
- 4) complying with the 30% ceiling on conventional feeds in the animals' finishing rations.

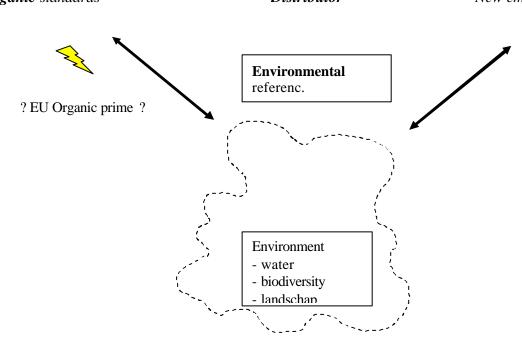
The failure to comply with these points in the specifications reflects the tension that exists between the production reference framework (organic specifications) and product's reference framework (the specifications set by the major distributors). That is why we suggest interpreting these observations as strategies for circumventing organic standards that result from the tension between two reference frameworks rather than deliberate fraud intended solely to increase profits or simplify obligations. It is interesting to see that these tacit circumvention strategies were contested by neither the Users Group nor the Competency Group.

4.4.2.2 Exploring the tensions between reference frameworks creatively

The roots of the tensions arise out of the divergences between reference frameworks. So, whereas for the organic reference framework 'natural' ranching means reducing the number of caesarean sections as well as the fattening rate (through rations and stabling periods), the product reference framework set by the major supermarkets is largely governed by the Belgian butchering reference framework, where the choice in favour of 'lean and tender' meat led to a search for abnormally heavy carcasses, which necessarily led to more caesareans, and carcasses close to the type S double-muscled (or 'culard') Belgian Blue (Stassart, 2003). Rather than simply acknowledging this clash between reference frameworks, we propose to explore the tensions to which it gives rise in order to open up, rather than close off, some space for negotiation amongst the players. So, the case shown in the following figure may be used to explore the various types of tension.

Production referenc. Product referenc. Consumption 1 2 3 ? max 30% belgian Product Employment, Differenciation? conventional feeding? butchers rural development ? Meat Packaging ? max 20% animal welfare ? Meat taste césarienne? Beef retailers diversity ? use of medecine? **Organic** standards Distributor New emergent demands

Figure 4: Intermediate action concept, exploring the tensions between reference frameworks



Tension 12 (between the organic producer's reference framework and the distributor's product reference framework) occurs in the long production chains in which the 'integration' and 'stockyard' models predominate. For reasons of the major distribution chains' strategic commitments, we believe that the stockyard model would be more open to this proposition. Indeed,

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we are indeed in a situation in which the farmers and supermarkets may be forced to negotiate, for lack of other options.

Tension 2-3 (between the distributor's reference framework and the consumer's reference framework) flares up, for example, in our focus groups, specially when it comes to challenging the need for packaging (selling in tubs) and, more broadly, the absence of ways for consumers to judge the meat's physical qualities (inability to touch, see, and smell).

Tension 13 (between the organic producer's reference framework and the consumer's reference framework) was clearly visible in public meetings of farmers. There were very marked divergences of opinion between farmers about the degree of product differentiation to offer consumers. Some of them argued that the idea was to offer products that were as close as possible to conventional products so as not to surprise consumers and, if push came to shove, would be in favour of authorising double-muscled Belgian Blues in the organic beef specifications. Others, on the contrary, tried to distance themselves from the conventional system by opting for different breeds, production systems, etc. Some farmers raised the issue of their uneasiness vis à vis consumers about the use of 30% conventional feeds in organic cattle's finishing rations, which spoke volumes about the consumers' expectations. These farmers expressed their desire to come closer to the goal of 100% organic feed. This tension, moreover, is what made it possible to formulate the stylisation of the action concept: 100% organic production to be able to dare to look the consumer straight in the eye'.

To complete this tension-based action concept, we nevertheless have to add a fourth, much vaguer, reference framework to the three 'discussion rooms' or negotiating areas mentioned above (and which are linked to marketing or production references). This is the environment, which, for lack of a spokesperson, did not emerge in any well-structured form in any of the forums that were organised under the current research protocol. Yet this reference framework is capital, for the organic farming premiums that are currently granted stem in part from environmental justifications. Whilst this reference framework made sense to the various players, they did not discuss it, because they implicitly considered it to be a given. They took it for granted. Yet, if we look at the various types of reconversion, we realise that the marketing of their outputs has actually weakened this reference framework, with stocking rates rising from 1 LU to 1.5 (even 1.6) LU, and there is a great risk that the European authorities will ultimately challenge the grounds for granting the premiums themselves in the case of Belgium. What is more, limiting ourselves to the first three reference frameworks would mean excluding 35 to 50% of the organic beef farmers from the research project. This raises more generally the issue of the research project's current configuration. This configuration, which is shaped by the production chain logic that permeates the application that was selected by the OSTC, completely overlooks one, even two, key dimensions of the sustainable framework that governs our research into normative contexts.

4.4.3 Describing scenarios

We can describe three scenarios arising from the intermediate action concept as stated above. They are intimately linked to the players' possibilities of collective action, that is to say, the involved players' abilities to get on board a collective learning process, something which is unknown at this point in the research.

Scenario 1: the short-chain heifer-ox system: tensions 1-3, 1-4

Scenario 1 explores the tensions amongst the production reference framework, consumer's reference framework and environmental reference framework. This exploration concerns two points: product differentiation and production system sustainability. It is being tested in a short-chain context. To do this, we have identified a network of innovative cattle farmers ('Type 4 reconversion') who have adopted such an approach and some short production chains that work according to the 'exploratory' model and into which a holistic learning process could be inserted.

Scenario 2: the long-chain young bull system: tension 1-2 and 2-3

Scenario 2 explores the tension between the production reference framework and product reference framework or, to put it differently, the tension between the obligation of means and control over the results. The exploration can concern the way the production chain is organised (stockyard model), especially as regards two points: the product's qualification (breed, link between breeder and finisher, etc.) and credibility. To do this, the project launched a dialogue with a group of beef farmers and a major retail chain that has committed itself to offering organic products for strategic reasons. The research project's intervention will consist in analysing the necessary competences, determining how to distribute them amongst the players, and work on their acquisition in conjunction with the producers and distributors.

Scenario 3: Extensive lean cattle farming: tension 1-4, 1-2

Scenario 3 concerns the lean breed cattle ranchers (Type 2 reconversion). This production system does not meet the environmental criteria that are linked to organic farming premiums. The action programme in this case consists in structuring the problem by setting up an appropriate Competency Group (FUL), taking stock of the current knowledge of the question, and using farm monitoring as regional references (CRAGx).

5 Scheduling and prospects

The tasks are being worked out. They will require the subsequent inclusion of an economic partner in the schedule. The table and cursory description that follow give an overview of the schedule that is currently being implemented.

Table 4: Distribution of tasks and links amongst the programme's actions.

Actions and tasks described	Tensi	Scientific	Scenario 1:	Scenario 2:	Scenario 3
in contract cp/19/191	on	Institution	heifer-ox,	Young bull,	Lean
	explor		Short chain	Long chain	Environment
	ed				
Monitoring of production system C1	1-2	CRAGx	3 farms	3 farms all	
Performances (stock, crops,		Veterinar	grazing +	grazing +	extensive
economic performance		ian	crops	3 grazing +	grazing
		RUG		crops	
Animals health/welfare					
Experimental pastures, 100% organic	1-2	CRAGx		4 farms	
C1		CEB			
Cross-learning of production modes	1-2	CRAGx	12 farms, vet	erinarian, crop	scientist, field
C1		FUL	technicians, cor	sumers	
Thematic visits and discussions					
between farmers and other players					
Product-consumption experimentation	1-3	FUL	3 farms	Open-house	
C4			Butchers		
Meat packages			Retailers		
Cuts to order			Consumers		
Pre-packaged cuts					
Intervention: production chain's	1-2	FUL,		6 farms	
organisation, credibility	2-3	RUG		Grouping	
C5-C6-C7, C9				Mass distrib.	
Environmental monitoring of	1-4	CRAGx	3 farms	6 farms	3 farms
production systems:					
plant biodiversity <u>C2-C3</u>					
leaching of nitrates					
matter and energy budgets					
Construction of the environmental	1-4				
questionC?		FUL	X	X	X
competency group		CRAGx	X	X	X
state of knowledge					
Specific actions C10		CEB			
Visit of the 'biobourgogne'	1-2-3	FUL			
production chain		CRA	X	X	X
Open-house days on the farms	1-2-3				
			X	X	X
	-	•		•	•

Monitoring of production systems: This concerns three types of farm characterised by both their cropping (grass +/- crops) and livestock (oxen-heifers, young bulls or lean breeds) choices. It

consists in close monitoring of soil fertility, the qualitative and quantitative performances of the animals and crops, parasite pressure in the pastures, feed, the herd's health and well-being, etc.

The '100% organic grazing' experiment' consists in revealing the impact of planned pasture management and the feasibility of 100% organic rations in raising young bulls.

<u>Cross-learning</u> is aimed at getting the cattle farmers who participate in the experiment to meet each other and stimulating interactions with veterinarians, crop scientists, field technicians, economists, etc.

<u>The product-consumption experiment</u> is aimed at establishing links between range-only beef production and processing and consumption and testing the product and its credibility.

The intervention in the production chain's organisation and the connection with credibility is based upon the hypothesis that the supermarkets and producers share a common desire to be believed (the credibility issue). The aim is the joint construction of a process of interaction between a group of farmers and a distributor (the latter will include its consumers).

<u>The environmental monitoring</u> of the production systems will consist in measuring two indicators of environmental pressure, namely, plant biodiversity and leachable nitrogen, complemented by drawing up the systems' energy and ecological (*i.e.*, mineral) balance sheets.

The environmental issue is structured by creating a special Competency Group, the role of which is to structure the problem by mobilising notably a study of the current state of knowledge about the environment and the results of the environmental monitoring of the twelve farms that participate in the experiment.

The goals of the <u>specific actions</u> are to link the scenarios and players within the project's action programme but also to link them to outside experiences and to open the action programme to concerned organic and conventional players. Other actions may be proposed under this framework during the project's two-year span.

Annexes

Annexe 1: Références

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Données Organismes de contrôle, Blick et Ecocert

Annexe 2: caractéristiques et répartitions des types d'exploitations en production bovine

Projet de reconversion	Tous	Opportunité financière (1)	Environneme nt (2)	Marché (3)	Marché et modèle product. (3) et (4)	Marché et modèle product. (3) et (4)
Système de production (animales et végétales)	Allaitant +/- Laitier (Wallonie)	Allaitant +/- Laitier Herbe +/- cult. (%)	Allaitant, maigre tout herbe (%)	Allaitant gras, +/- Laitier tout herbe (%)	Allaitant gras +/- Laitier Herbe + cult. (%)	Allaitant maigre +/- Laitier Herbe +/- Cult. (%)
Nombre d'unité de production	208	19	36	15	20	10
SAU Tot (ha)	10.636	11	30	17	25	17
Act. agricole (%) % Act. viande	55 57	29 32	25 81	66 76	92 39	64 16
SAU Moy (ha)	51	17	43	55	61	36
SAU en herbe en % de la SAU	90	95	98	100	77	86
LU/ha	1.4	1.1	1.0	1.6	1.5	1.3
mixte	6928	7	29	18	19	27
Pourcentage engraisseme nt	32	5	1	85	78	5
Nbre d'animaux finis / an	2.256	1	1	47	47	4
Autonomie alimentaire (%)	87	100	129	77	77	85

L'indice de dimension économique (Act. Agricole %) qui représente la part de revenu assuré par l'activité agricole indique que les reconversions financières et environnementales ne sauraient êtres

que très secondaires dans la part de revenu qu'elle procure au chef d'exploitation et que les systèmes plus complexes associant élevage, engraissement et cultures atteignent des valeurs proche de 100%. La part du troupeau allaitant dans l'activité agricole (% Act. Viande) est prépondérante dans les systèmes tout herbe qu'il s'agisse de reconversion environnementale (81%) ou par le marché (76%). Par ailleurs 52 % de la viande commercialisée est produite dans des exploitations où l'atelier allaitant occupe par une place secondaire parmi les autres productions agricoles (16 à 39%) En ce qui concerne la structure des exploitations on relève que la production d'animaux de boucherie se répartis en parts égales entre des systèmes "tout herbe" et "herbe associée à des cultures", principalement fourragères (64%). Que les élevages qui finissent leurs animaux sont de plus grande taille (55 à 61 ha contre 36 à 43 ha) et que la densité en bétail y dépasse en moyenne les 1,5 LU à l'ha signifiant une pression environnementale plus forte comparés aux autres systèmes (1,0 à 1,3 LU/ha). C'est dans ces élevages que l'autonomie alimentaire, c'est à dire le rapport entre la superficie de l'exploitation et la superficie nécessaire pour nourrir ses animaux est la plus faible et correspond, pour la seule production bovine à un déficit en cultures fourragères de l'ordre de 1076 ha soit 25% de la SAU des systèmes engraisseurs. Ce taux passe respectivement à 10 % et à 0% dans les systèmes de production de bétail maigres et environnementaux.

Annexe 3

Typologie indicative des restaurateurs

Les anti-BBB

Pour ces restaurateurs, plutôt haut de gamme¹, qui représentent la majorité des établissements sondés, le BBB est une viande peu appréciée, voire pour certains, carrément exécrée. Les critiques à l'égard du BBB sont posées aux niveaux de la sécurité et des caractéristiques intrinsèques de la viande: viande douteuse, insipide. Les anti-BBB s'inscrivent en faux de l'idée que la qualité d'une viande bovine soit définie par sa seule tendreté. La viande qu'il recherchent est une viande au goût prononcé, persillée, marbrée, de couleur rouge vif voire bordeaux. Les anti-BBB remettraient donc en cause un point d'appui fondamental qui a servi au développement de la race BBB: «le tendre et le maigre ». L'argument de la race¹, contrairement à l'argument du mode de production, est très fortement mobilisé: bœuf irlandais, argentin, de Nouvelle-Zélande, d'Angus Beef, de Charolais, de Limousin, de bœuf de l'Aubrac, de Salers et de Sinenthal. Bien informés en matière de viande bovine, les anti-BBB ont une démarche de recherche active en dehors du réseau de leurs fournisseurs: revues spécialisées, académie culinaire, cuisine d'autres confrères.!

Les Mitigés

La demande en viande bovine et la démarche d'information de ces restaurateurs, sont sensiblement les mêmes que chez les anti-BBB. La principale différence tient dans la position que les mitigés adoptent face au BBB. En effet, pour ces restaurateurs, le BBB est une viande qui peut être bonne. Même s'ils connaissent l'existence de trafics, ils ne condamnent pas la race dans l'absolu. Leur raisonnement se fonde sur l'importance de la bête, de son origine, de la manière dont elle a été élevée, et en particulier, nourrie. A la différence des anti-BBB, les mitigés s'appuient donc en partie sur les modes de production, notamment l'alimentation. Contrairement aux premiers, ces dernier peuvent accepter de travailler le BBB, bien que cette viande ne constitue par leur premier choix. L'importance du critère de la tendreté de la viande paraît, chez eux, plus prononcée.

Les pro-BBB

Ces restaurateurs, minoritaires et plutôt moyen et bas de gamme, estiment que le BBB est la meilleure des viandes. Mis à part la tendreté, à laquelle ils sont extrêmement sensibles, ces cuisiniers parlent très peu des caractéristiques intrinsèques de la viande bovine qu'ils recherchent. Ici, l'appui sur la tendreté est donc très clair. Disposant de peu de connaissances, ils ne cherchent pourtant pas à s'informer ailleurs que chez leurs fournisseurs. Ils se fient avant tout à leur expérience sensible de grands mangeurs de viande!

