



Progress Report 2007 and Application for Continuation in 2008

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(CONCEPTS)**

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- * Sigrd Denver is employed as a PhD student in the project and is involved in all three work packages.
- ** Sinne Smed is employed as a post doc. on the project and involved in WP2.
- *** Karsten Klint Jensen is involved in WP2.
- **** As Pernille Kaltoft no longer works at the National Environmental Research Institute, Mette Jensen now undertakes Pernille's tasks as responsible scientist in WP3.
- ***** Anne Holst Andersen will be involved in WP3 instead of Pernille Kaltoft.
- ***** Olaf Rieper will be involved in WP3 due to a transfer of tasks from IHE to AKF.

7. Midterm description of the project, its results and progress, and application for continuation in 2008

A. Project summary

In **Work Package 1** we study how consumers categorise organic food products in the context of everyday shopping and meal preparation. It is usually assumed that the demand for organic products is due to people's concern with health, animal welfare or the environmental impact of food production. However, recent research shows that consumers tend to conceive these and other attributes of organic products as an *integrated* whole. These consumers see organic farmers as sharing consumer concerns about food quality and caring about the needs of soil, plants and animals. Moreover, the product advantages of organic products with respect to health and environmental friendliness are seen as interdependent. Another type of conception is the *diffuse* way, where consumers conceive

that the attributes of organic products are separate and distinct. Here organic products constitute one or more product characteristics, which are shared by some conventional variant of the same products. The hypothesis in this project is that consumers either categorise organic products as (a) constituting a single integrated category (the '*integral*' mode), or as (b) exhibiting one or more product advantages, which are shared by some conventional variants of the same products (the '*diffuse*' mode). The purpose with this work package is to identify demographic and social characteristics of consumers who categorise organic products in these two ways and investigate the relationship between consumer characteristics and attitudes towards food products, producers and production methods. Moreover, we will look at the relationship between willingness to pay a premium price for organic food products and the criteria consumers employ in categorising and ranking food products

At an empirical level, we employ a qualitative method of sociological investigation by means of focus groups in order to delineate the criteria employed in distinct modes of categorisation. Our study distinguishes itself by being based on observations of stated as well as actual purchasing behaviour. The project applies information at the individual household level (utilising panel data of 2,000 households' daily purchases of a large number of organic as well as conventional foods since 1997), which makes a detailed and informative approach possible. The panel data set also encompasses background variables making it possible to analyse how consumer behaviour depends on household characteristics such as income, geographical location, education, occupation, age, number of children, etc. In addition, the purchase data are supported by a questionnaire, surveying households in the very same panel for information on attitudes, stated values and food habits. With this questionnaire we hope to uncover a number of dimensions of basic orientation that may affect preferences for organic foods (local-international, modern-traditional, collective-individualistic political orientation etc.). The questionnaire also attempts to uncover specific ways of thinking about organic foods (confidence attributes etc.). Thus, we utilise a household level panel data set with daily registration of food purchases combined with preference information elicited from panel members through a questionnaire. The questionnaire in WP1 will be integrated with the questionnaire survey in WP3, in order to take advantage of synergy effects fully and to avoid confronting the panel member with too many questionnaire rounds. The questionnaire designed in 2007 is in many ways similar to the questionnaire conducted in 2002 in the project "Consumer Demand for Organic Foods – Domestic and Foreign Market Perspectives"¹. This allows us to compare and find changes over time in attitudes and conceptions towards organic products and organic farmers and processors for different types of (organic) consumers which will be done in WP3.

We also use a choice experiment to investigate how preferences for food attributes (such as food safety, animal welfare, environmental impact, convenience, etc.) depend on whether the attributes are provided as part of an organic product or provided individually. In this way, we can test whether preferences for individual attributes are *context dependent*, in particular, how categorisation affects demand behaviour. More over, this method is used to determine the extent to which willingness to pay a premium price for organic food products is dependent upon the criteria employed in consumers' mode of categorising organic products.

In 2006/07 we have

- identified how consumers perceive organic products, the organic production method and food in general through focus-group interviews.
- examined the motives for buying organic products and attitudes towards organic products and production methods.
- designed focus-group interviews during the autumn of 2006 in cooperation between CONCEPTS' partners and Gertrud Øllgaard, Senior Project Consultant at Explora A/S. Data were collected in November 2006. A report of the design and findings of this study was delivered to CONCEPTS' partners in January 2007 and presented in oral form at a meeting in May 2007.
- examined how representative the GfK panel is with respect to age, sex, number and age of children, place of residence, income, education, employment and political conviction.
- analysed the GfK data set with respect to purchasing pattern and socio-demographic characteristics. This also serves as background for the design of the choice experiment in WP1 and WP2.

In 2007-9 we will

¹ The project was carried out under the Danish [DARCOF centre](#) and financed by the Danish Ministry of Food, Agriculture and Fisheries. The project was initiated in 2000 and ended in 2004.

- merge the GfK data set with the data from the questionnaire in order to classify and group panel members according to purchasing behaviour, perceptions of the organic products (modes of categorisation) and consumer characteristics.
- design and carry out the choice experiment. The experiment will be conducted in conjunction with the experiment in Work Package 2.
- write five working papers documenting the methods used and the achieved results.
- write and submit three articles to international journals.

In order to assess the stability of the demand for organic food, the purpose with **Work Package 2** is to study how information about various key issues with regard to organic food products influences consumer risk perception and food choice behaviour. In particular, we hope to identify different groups of consumers according to the characteristics of organic products and production they find most important, why they do so, and how robust these groupings are with respect to changes in information. We expect that these changes are less significant for (a) consumers using the 'integral' mode of categorising organic products, as compared to households using the 'diffuse' mode of categorising organic products, and for (b) people acting in the capacity of *citizens* who support organic farming as compared to *consumers* of organic food products. We focus on the type of information that is (a) documented information by experts, and (b) stories regarding organic and conventional food products and production methods as reported by mass media.

Our main hypothesis is that consumer preferences for different attributes are context dependent. Hence, statements such as 'willingness to pay for food safety' are too simplistic and do not capture the true demand behaviour. In this work package, we will test the following hypotheses: First, the 'convenience' attribute might be relatively more important in conventional food than in organic food, second, zoonoses might be considered more acceptable in animal products from organic than from conventional production, third, major profits to processors rather than to farmers and growers might be less tolerated in organic production, and finally, high degrees of import, foreign control schemes and processing may be less accepted for organic products. Furthermore, when a consumer values two apparently contradicting attributes (i.e. a high level of processing and organically produced) it is not only important to determine the value of the attributes (the willingness to pay), but the trade-off (the *relative* willingness to pay).

The work in this work package consists of two parts. Firstly, to give a more nuanced understanding of the values underlying organic production and consumption through a philosophical reflection. The organic properties are meant to realise a set of values: health, ecology, fairness and care. Philosophical reflection on such values seeks to uncover fundamental assumptions and intuitions and to analyse their possible justification and implications. In general, a set of values can be interpreted consistently in different, often conflicting ways. This is true of the organic values as well. Secondly, we aim to reveal consumer preferences by using methods based on observed as well as revealed preferences. We apply *choice experiments* to reveal the effects of information about documented differences between organic and conventional products with special attention to differences in extent of import, control and processing and allocation of profits through the organic food chain. Moreover, we will assess how selected information from scientific experts influences consumer perceptions and valuations in the field of animal welfare (a pure public good) and personal health (a pure private good). By using choice experiments to elicit consumer preferences, it is possible to identify the perception and valuation of specific attributes and how they vary across socio-demographic characteristics and other background variables. Beyond using a choice experiment we apply a *panel data analysis* in combination with media data to assess the effects of food scares and other types of information on the actual purchasing patterns of various types of households. The strength of our approach lies in utilising new possibilities for linking media information flows to household media habits and again to actual purchasing behaviour (through the GfK household panel data set). Using a panel model approach, we can distinguish between simultaneous changes in prices, information provision, store choice etc. for each household. In addition to these background variables, the panel provides information on detailed media habits of each person in the household. Combining this information with household purchasing pattern and data on food scares in the media makes it possible to link information flows to specific types of media exposure in individual households and again to household purchasing pattern.

In 2006/07 we have

- examined the understanding of the values underlying organic production and consumption through a philosophical reflection. This has provided the background and inspiration for the planning of focus groups (WP1) and the design of the questionnaires in the surveys (WP1 & WP3) and in the choice experiments (WP1 & WP2).

In 2007-09 we will

- based on the experience from observed data and the literature review design and carry out the choice experiment. The experiment will be conducted in conjunction with the choice experiment in Work Package 1.
- link media coverage with the weekly GfK data household in order to show the impact of new information on demand. The media to be included covers articles in Danish newspapers that can be bought from Danish Media, a database covering twelve newspapers (Berlingske Tidende, B.T., Ekstra Bladet, ErhvervsBladet, Fyens Stiftstidende, Information, Jyllands-Posten, Politiken, Vejle Amts Folkeblad/Fredericia Dagblad, Aktuelt, Weekendavisen and Flensborg Avis). Information on media habits of the GfK panel will also be used, including preferred TV channels and programmes and numbers and read newspapers.
- based on the philosophical reflection in the project, a presentation on organic farming and the care for nature be prepared for a conference, and an international paper on this subject is in progress and planned to be completed by the end of 2007. Moreover, we will write two partly overlapping international papers on the concept of sustainability, including its relation to organic farming, a paper on corporate responsibility (only marginally part of the project) and another on organic farming and the care for nature is progressing.
- write and submit three articles to international journals.

The point of departure for this **Work Package 3** is an apparent paradox pointed out by previous research: Even though a considerable number of people appear to be willing to act in support of organic food production in the role of citizens, being willing to pay tax that supports organic agriculture, one third of these people do not support organic food production in the role of consumers, as they do not buy organic food products today to any notable extent (Project III.1 under the DARCOF II programme). In order to understand this pattern, this study will focus on the roles of citizen and consumer in relation to the topic of organic food, exploring: 1) the different dynamics and rationales, and the different conceptions of organic products, producers, and production methods, which govern the different roles; 2) the interplay between those roles in the context of people's everyday lives and the ways the roles may be intertwined, e.g. in the role of political consumer. The study will be based on personal qualitative interviews with a minimum of 15 respondents with varying demographic characteristics. Respondents will be chosen on the basis of preliminary telephone screenings identifying basic demographic characteristics as well as reported willingness to support organic agriculture via taxes and consumption of organic products, respectively.

Hypotheses yielded by the foregoing qualitative studies, as well as the results yielded by work undertaken in WP1 and WP2, will be tested by means of quantitative data collected from the households in the GfK panel through three postal questionnaires (one already carried out in 2002, one undertaken in 2007 in conjunction with WP1, and one which will be administered in 2008 as part of WP3). We expect to be able to follow changes for most of the household panel, since a significant number of panel members stay in the panel during more than a few years. Thus, 943 households in the panel have both completed the questionnaire in 2002 and again in 2007. Using the three questionnaires enables us to track changes over time in attitudes and orientation driving organic preferences, the underlying perceptions and conceptions and link these to changes in lifecycle and social situation. Using the extensive food purchase diary data available for the panel we will also estimate how organic food demand are affected by these changes as well as prices and information loadings (see WP2). Identification of dimensions of orientation (so-called lifestyles) will be done using factor analysis. Dimension values for households will in turn be used as conditioning variables when food demand is estimated using panel data techniques. Moreover, an analysis of the GfK data set in the same time period will be carried out in order to track dynamic changes in purchasing patterns of households with respect to organic foods, identifying relationships between household types, changes in the socio-demographic characteristics of the household, level of consumption and frequency with which specific product types were purchased, and differences across sales channels (store choice).

In 2007-09 we will

- make a qualitative study by means of personal interviews in order to examine whether purchasing behaviour depends on whether people act as citizens or consumers. Questions that can be used to elicit this difference will be formulated and included in the questionnaire developed under WP1.
- send a questionnaire to the GfK panel in spring 2008.
- examine the relationship between changes in socio-demographic characteristics, purchasing pattern and changing perceptions of organic products, producers and production methods in the time period 2001-08.
- write four working papers documenting the used methods and achieved results.
- write and submit at least four articles to international journals.

Table A.1: Work package list (from application)

WP No.	WP title	Responsible scientist	Budget DKK	Start	End	Deliverable No.
1	Categorisation of organic products	KOJ	2,678,614	01-2006	12-2009	D1.1-D1.8
2	The effects of information about key issues	TC	3,379,646	01-2006	12-2008	D2.1-D2.4
3	Explaining changes in demand for organic foods at household level	MW	3,941,740	01-2008	12-2009	D3.1-D3.8
Total			10,000,000			

B. Objectives and expected achievements

The project seeks to address the challenges presented by the production, processing and distribution of organic foods in Denmark with regard to the maintenance and development of consumption by:

- analysing the extent to which consumer confidence in organic foods is based upon a conception of 'organic' as constituting an *integrated whole* such that any particular benefit, seen in isolation, is valued less than the same attributes seen as a whole,
- analysing apparent paradoxes and contradictory trends in consumer conceptions of organic products, with particular regard to the effects on product preferences of new information concerning the character or consequences of organic production, processing, international distribution, certification and labelling of products,
- analysing the mechanisms' underlying changes in levels of demand at the household level, with particular regard to socio-demographic changes, changes in consumer conceptions of products and tensions between the roles of *consumer* and that of *citizen*,
- providing a consolidated assessment of recent, current and future trends regarding the consumption of organic food products with particular regard to the viability and stability of demand, as well as concrete recommendations to other stakeholders involved in the organic food market in Denmark.

C. Midterm results and progress

C.1 Description (summary) of main results and conclusions for each year

Results and conclusions achieved in 2006

Features influencing consumer perceptions – result from the focus groups

A qualitative study by means of focus groups was planned as from the summer of 2006. By September 2006, partners in the CONCEPTS project had reached the conclusion that the objective of this study, as originally formulated, had been too narrowly conceived. It was agreed that if this study

should contribute fruitfully to the design of the survey questionnaire, this would best be done in two ways. Firstly, the qualitative study should not only focus upon product conceptions among consumers, but also conceptions of producers of organic food. Secondly, the attempt should be made to identify differences between consumers in a manner that could later be exploited for the purpose of identifying consumer segments on the basis of survey data.

The qualitative study identified the following as central distinguishing features among consumers with reference to their conceptions of organic food products and producers: (1) the character of relative involvement in food issues and food preparation, (2) ways in which practical limitations imposed by limited resources (time, money and skills) influenced decision making in the contexts of everyday shopping, (3) satisfaction with organic food products with particular reference to taste, freshness, and perceived benefits to health, (4) trust in producers, production methods and labelling, and (5) the tendency to link the cares of food provision in the household with moral concerns about food production and its long-term impacts upon nature, soil and groundwater quality, crops, animals and people. Six segments among consumers were identified with reference to these dimensions.

Reflections on values

A hypothesis has been stated: consumers who consider organic properties parts of an integrated whole are likely to believe in an eco-centric environmental ethics, according to which humans are part of ecosystems, and there is a duty to make these ecosystems function well. This is opposed to either anthropocentric environmental ethics, or to an eco-centric environmental ethics, according to which only wild nature is valuable. The concept of sustainability presented in *Our Common Future* is anthropocentric. Its prescriptions depend on which substitutions will be possible in the future. Hence, decisions about sustainable agriculture are decisions under uncertainty. Organic farming can be considered the most risk averse choice.

The concept of sustainability presented in *Our Common Future* is a Top-Down approach: It measures sustainability on a global level, and from this level it derives prescriptions for particular areas such as farming. These prescriptions are laden with uncertainty. A widespread approach in systemic research on agriculture is Bottom-Up: It is concerned with sustaining the individual farm. Ethically speaking, the Top-Down approach has the upper hand, but given the uncertainty of its prescriptions, the Bottom-Up approach may have some interest. Organic farming can be considered an attempt to reduce the uncertainty by choosing methods known to be sustainable over time. Marginally related to the project, it is shown that corporate responsibility primarily befalls the owners of a business, not the business itself understood as a coalition of multiple stakeholders.

Results and conclusions achieved in 2007

Factor analysis of the 2002 questionnaire

In order to select the questions in the 2002 questionnaire which are relevant to the present study a factor analysis of the answers to the 2002 questionnaire was carried out. It had two purposes. Firstly, a factor analysis was used to identify underlying values carried by households in the GfK panel that found their way through the questionnaire. Secondly, the factor analysis was used to bundle questions in larger groups by comparing the variation in answers. This feature allows us to use fewer questions to explain the same underlying values (or opinions).

From the factor analysis it was concluded that the 2002 questionnaire was not very focused and that the questions covered a wide range of opinions. However, by the use of factor analyses we were able to find some underlying ideas and attitudes that find their way through the questions. It was interesting to find that there was both a positive *and* a negative attitude towards organic production – not on the same axis. So being negative is not just being “not positive” to organic products and vice versa. This is interesting because policy initiatives should be directed separately both towards those who are reluctant to buy organic foods and those who are positive towards organic foods. We also find that GMO is causing some worries – but the analysis does not link this worry to the questions regarding organic production. Health is not precisely defined in the questionnaire, but nevertheless we find that health and food safety are linked and cannot be directly associated with organic production. But both health and food safety worry people. Health is a concern that influences the consumption decisions. Buying products from local (Danish) farmers also seems to be important for the consumers, or at least a factor that they think about when they buy food.

The questionnaire

A survey questionnaire was developed incorporating several of the perspectives suggested by the focus groups and factor analysis. By posing questions that focus on these features, we are able to categorise consumers into different types of consumers who conceive organic products differently. In addition, questions on political conviction, political consumerism, links between ecology and different food attributes and on the general attitude to labelling were included in the questionnaire. Questions on education, which profession/industry people work in, political conviction, and social and cultural capital were also included as these things are also expected to influence the way people perceive organic foods. The questionnaire was sent to all 2,376 households in the GfK panel and completed by 2,022 households in the time period from 24 April to 15 May 2007 implying a response rate of 85%. An initial analysis of survey data has been undertaken, the results of which were presented at a meeting on 27 September 2007.

Description of organic consumption

A description of the organic consumption in Denmark based on data analyses of the newest GfK data (2006) was carried out. Organic consumption in Denmark increased through the 1990s to an average household food budget share of around 5%, which makes Denmark the country with the highest organic consumption. The average organic budget share for the households in the panel has increased from 4.5% in 2002 to 6.5% in the last quarter of 2006. Around 9% of the 1,359 households did not buy any organic products in 2006 and could thereby be categorised as *non users*. Approximately half of the panel was in 2006 *light users* and one out of four was *medium users*. 15% of the household spend more than 10% of the food expenditures on organic varieties (the *heavy users*). We found that organic milk and eggs are bought by all organic consumers, but for other product categories we found large differences across user groups. In addition, we looked at the dynamics of organic consumption. We found that 10-60% of the consumers remained in the user group where they initially were placed in 2002. Heavy and light users were more likely to have a stable demand than medium and non users. For all user groups a relatively high proportion of the households had fluctuating consumption while relatively few constantly increased or decreased the organic consumption.

The description of market behaviour revealed significant differences between products – both in terms of different consumers buying different products and in terms of differences in price premiums. We note that differences in price premiums can be due to differences in production costs as well as differences in demand. In the questionnaire, we elicit information only about the demand side.

Study on willingness to pay for food attributes and organic products

A previous study on consumers' willingness to pay (WTP) for food safety and animal welfare has been given an organic angle by assessing differences in willingness to pay for these attributes for organic consumers and non-organic consumers. We found that organic consumers had significantly higher willingness to pay for particular animal welfare, but also for food safety, than non-organic consumers.

Our present review on the literature revealed only a limited literature on consumers' WTP for organic products and only few studies use choice experiments to reveal consumer preferences. The studies can be divided into the following three groups:

1. *WTP for organics without information*. Studies eliciting price premiums that consumers are willing to pay for organic products as compared with conventional food and/or other production systems *without* further information concerning the organic products. This type of experiment might reflect a typical shopping situation where consumers face products with or without organic labels. Two examples of such studies are found in Gil *et al.* (2000) and Batte *et al.* (2007).
2. *WTP for organics with initial information*. Studies eliciting price premiums that consumers are willing to pay for organic food as compared with conventional food and/or other production systems *with* additional information concerning the organic products provided before the actual choice experiment is carried out. The drawback with these studies is that they do not measure the effect of providing information to consumers which makes it difficult to evaluate to what extent consumers' consumption of organic food is influenced by this information. This type of experiment might reflect a shopping situation after a public information campaign. This type of studies dominates the literature on WTP for organics and six papers were found.
3. *The effect of information on the WTP for organics*. Studies eliciting the price premiums consumers are willing to pay for organic food and/or other production systems *with and without* information. None of the cited literature above on organic foods tests how the provision of information to consumers may influence their behaviour. This, despite the

fact that earlier findings within the stated preference literature show that expert information presented in contingent market reduces respondent uncertainty and thereby increased validity of WTP statements. This also suggests that the outcome of a stated preference survey highly depends on the amount of information presented to respondents in the survey. These findings have changed the standards for describing stated preference studies in the international literature as today information provision is a necessary part of a design description.

We found a few studies on the effect of information – but only one where the effect of information on consumers' WTP for organic products is analysed. Underhill & Figueroa (1996) analyse consumers' preferences and WTP for organically labelled products where only half of the sample is provided with information on the considered labels (Organic, Certified Organic, Certified Pesticide Residual-Free, and Grown with integrated pest management practice). This allowed them to test whether respondents' preferences for these labels were influenced by their knowledge of these labels. The likelihood of purchase and the WTP questions were asked such that the respondents answered on a scale ranging from "very likely" to "very unlikely" whether they were willing to pay from 0% to 20% more for a labelled product. Building upon two-stage utility maximisation and using an ordered logit model to analyse the data, this method provides information concerning consumers' WTP. They found that for informed as well as uninformed respondents, the WTP for organically labelled produce was highest and highest for the informed group of respondents. This suggests that information on labels can be used to influence consumer behaviour.

Preliminary results show that consumers' perceptions of the importance of different attributes vary across products. In particular it was remarkable that consumers perceived animal welfare to be very important in shell eggs, but not in chicken meat. These findings indicate the importance of choice of attribute and product.

Designing the choice experiment

The review of stated preference literature suggests that only few studies use choice experiment (CE) to reveal consumers' WTP for individual attributes associated with the consumption of organic foods. Moreover, only a single study was found that focuses on testing how information concerning organic versus other production systems influence organic consumption. These findings suggest the following hypotheses to be tested in our CE:

- 1) Consumers' WTP for certain attributes is product specific.
- 2) Information about production methods, country of origin, etc. have different effects on consumers' valuations of different products (in example meat vs. vegetables, organic vs. conventional).
- 3) Consumers being loyal users of organic products are less sensitive towards negative information regarding organics than more occasional users.

Can consumer perception of organic food be captured by their willingness to pay?

Recent surveys on consumer behaviour in relation to organic consumption revealed that a major part of the consumers indicated that the authorities had an important role to play in supporting organic production even though they did not buy organic food themselves. These findings suggest that consumer perception of organic food might not be captured fully by eliciting their willingness to pay for organic food. Similar findings are made in relation to food safety in that despite the large focus on food safety in recent years, the market shares for products that offer high levels of food safety (as for example, Salmonella- and Campylobacter-free meat products) are still small. Furthermore, a recent review over stated preference studies of the WTP for food safety indicated that consumers do have a WTP for food safety and that the WTP estimates for safer food were higher than the WTP reflected in the market behaviour. Finally, sociological studies indicate that consumers perceive all food to be safe and that it is the responsibility of the public authorities to guarantee this rather than something they as consumers should worry about. Hence, by considering multiple strands of research, our findings suggest that there are some controversies in the perceptions and valuations of food safety and maybe also organic production where willingness to pay for market goods does not capture the full value of the characteristics.

We suggest that food safety and organic production call for a reversed political consumer. A conference paper is written on the topic "a reversed political consumer" which is defined as a person who does not reveal his preferences through market behaviour, but instead prefers that his needs are taken care of through other channels than the market – such as through general rules, private dona-

tions to organisations, etc. The hypothesis of our work in progress is that identifying when the respondents act as political or reversed political consumers, might be one of the keys to understanding the divergence between stated and revealed behaviour, and furthermore the link to determine how much food safety can be expected to be provided using the market mechanisms and how much that needs to be provided through public interventions.

C.2 Fulfilment of deliverables and milestones

Deliverables list (from application)

Work package 1						
Deliverable No	Deliverable title	Lead scientist	Delivery date	Allocated scientific person moths	Type of deliverable	Fulfilled (ok) or deviations (d)*
D1.1	Working paper documenting focus groups interviews	KOJ	01-08	10	O	
D1.2	Working paper documenting questionnaire and survey results	SK	06-08	4	O	
D1.3	Working paper documenting panel data set and methods	LMA	12-09	7 (7½)	O	
D1.4	Working paper documenting choice experiments	TC	06-09	2	O	
D1.5	Working paper regarding categorisation of organic food products	KOJ	01-09	2	O	
D1.6	International paper regarding analysis of relationships between main categorisation principles and household characteristics such as socio-demographic situation, values and attitudes	KOJ	06-09	5	S	
D1.7	International paper regarding analysis of relationships between main categorisation principles, household characteristics and purchase pattern	MW	12-09	3	S	
D1.8	International paper regarding the relationships between main categorisation principles and consumer valuations	SK	06-09	2½	S	

* Deviations are to be further discussed in D.

Milestones list (from application)

Work package 1			
Milestone No	Milestone title	Delivery date	Fulfilled (ok) or deviations (d)*
M1.1	Focus groups interviews	12-07	ok
M1.2	Questionnaire survey among panel members	12-07	ok
M1.3	Choice experiments	06-09	
M1.4	D1.6 submitted	06-09	
M1.5	D1.7 submitted	12-09	
M1.6	D1.8 submitted	06-09	

* Deviations are to be further discussed in D

Deliverables list (from application)

Work package 2						
Deliverable No	Deliverable title	Lead scientist	Delivery date	Allocated scientific person moths	Type of deliverable	Fulfilled (ok) or deviations (d)*
D2.1	International paper on the effects of foods scares on purchase pattern	LGH	06-09	7½ (8)	S	
D2.2	International paper on the importance of key elements regarding human health and animal welfare	PS	12-09	5 (7)	S	
D2.3	International paper on the importance of key elements regarding import, processing and control	SK	12-09	8	S	
D2.4	International paper on the importance of key elements regarding food safety (zoonosis) and profit allocation/direct sales	TC	12-09	8	S	

* Deviations are to be further discussed in D.

Milestones list (from application)

Work package 2			
Milestone No	Milestone title	Delivery date	Fulfilled (ok) or deviations (d)*
M2.1	Choice experiments	01-09	
M2.2	Panel data analysis of the effects of food scares	01-09	
M2.3	Econometric estimations of consumer ranking	06-09	
M2.4	D2.1 submitted	06-09	
M2.5	D2.2 submitted	12-09	
M2.6	D2.3 submitted	12-09	
M2.7	D2.4 submitted	12-09	

* Deviations are to be further discussed in D.

Deliverables list (from application)

Work package 3						
Deliverable No	Deliverable title	Lead scientist	Delivery date	Allocated scientific person months	Type of deliverable	Fulfilled (ok) or deviations (d)*
D3.1	Working paper documenting personal interviews with consumers	OR*	12-09	10	O	
D3.2	Working paper documenting personal interviews with citizens	MJ	12-09	7	O	
D3.3	Working paper documenting first and second questionnaire surveys	SK	12-09	4,5 (5)	O	
D3.4	Working paper documenting panel data analysis	LGH	12-09	12 (12½)	O	
D3.5	International paper on the role of modes of categorising organic products regarding changes in purchase pattern	OR*	12-09	5	S	
D3.6	International paper on the role of social/life cycle situation regarding changes in purchase pattern	LGH	12-09	12½	S	
D3.7	International paper on the role of changes in underlying values and attitudes regarding changes in purchase pattern	MW	12-09	3,5 (5)	S	
D3.8	International paper regarding the importance of households acting as citizens versus consumers	MJ	12-09	7	S	

* Deviations are to be further discussed in D.

Milestones list (from application)

Work package 3			
Milestone No	Milestone title	Delivery date	Fulfilled (ok) or deviations (d)*
M3.1	Personal interviews with consumers	12-09	
M3.2	Personal interviews with citizens	12-09	
M3.3	First questionnaire survey	12-07	ok
M3.4	Second questionnaire survey	12-09	
M3.5	Panel data analysis	12-09	
M3.6	D3.5 submitted	12-09	
M3.7	D3.6 submitted	12-09	
M3.8	D3.7 submitted	12-09	
M3.9	D3.8 submitted	12-09	

* Deviations are to be further discussed in D.

D. Description of deviations and subsequent adjustments of plans

The decision to broaden the focus of the qualitative study in WP1 entailed a departure from the earlier plan to focus upon cognitive aspects of product categorisation, informed by Lakoff's theory of categorisation. It was not possible to pursue this somewhat narrow, but nevertheless important, objective at the same time as broadening the aims of WP1. However, it is now judged that this decision has yielded very fruitful results. The dimensions identified could be employed in questionnaire development and in the subsequent preliminary analysis of survey results, yielding a classification of con-

sumer segments on the organic market that appears to be of interest to organic actors and may prove to be a useful tool with regard to market development. CONCEPTS partners have been invited by DARCOF to develop these perspectives further in the course of 2007-8 in cooperation with marketing department of the National Organic Association. Furthermore, the qualitative study also yielded results regarding the relevance of different assessment criteria as applied to a range of different organic food products by consumers. It is expected that the latter results can be usefully employed in the design of choice experiments.

In the original project plan Katherine O'Doherty Jensen (IHE) was responsible for undertaking personal interviews with consumers in WP3. However, the other researcher at IHE who should be involved in this sub-project has moved to another position. The steering group in CONCEPTS has therefore agreed that AKF undertakes this sub-project instead with Olaf Rieper (AKF) as lead scientist. Olaf Rieper has many years of experience in qualitative (in depth) interviewing covering both individual interviews as well as focus group interviews. The themes of interviews span a wide field from individuals with disabilities on the services they receive, company managers on environment and health issues, interview with high level officials on performance management, steering network of organisations and alternative community development – among other themes. Katherine O'Doherty Jensen (IHE) will at the same time act as consultant on this sub-project. With this solution, the sub-project in WP3 can be carried out at the same high quality, and deliverables and milestones can be fulfilled as described in the original project plan.

Apart from the above there have been no deviations from the original project plan.

E. Project publications and other products

1. Products from Organic Eprints archive

Publications

- Christensen, Tove; Denver, Sigrid and Krarup, Signe (2007) [Forbruget af økologiske varer og ernæringsrigtig kost](#). [Consumption of organic products and a healthy diet]. Samfundsøkonomen.*
- Christensen, Tove; Denver, Sigrid and Krarup, Signe (2007) [How vulnerable is organic consumption to information?](#). Paper presented at Nordic Consumer Policy Research Conference, Helsinki, Finland, 3 -5 October 2007.*
- Christensen, Tove; Denver, Sigrid and Mørkbak, Morten Raun (2007) [Food safety and the reversed political consumer](#). Paper presented at Nordic Consumer Policy Research, Helsinki, Finland, 3 -5 October 2007.*
- Christensen, Tove; Denver, Sigrid and Mørkbak, Morten Raun (2007) [Forbrugere er villige til merpris for kyllinger med høj dyrevelfærd og fødevarer sikkerhed](#). In FOJOenyt.*
- Jensen, Karsten Klint (2007) [Sustainability and Precaution](#). Animal.*
- Jensen, Karsten Klint (2007) [Sustainability and Uncertainty: Bottom-Up and Top-Down Approaches](#). Italian Journal of Animal Science 6(Supplement 1):pp. 853-855.*
- Jensen, Karsten Klint (2006) [Corporate responsibility](#). Paper presented at The 6th Congress of the European Society for Agricultural and Food Ethics, Wageningen, page pp. 413-417.*
- Jensen, Karsten Klint (2007) [Corporate Responsibility: The Stakeholder Paradox Reconsidered](#). Journal of Agricultural and Environmental Ethics.*
- Krarup, Signe (2007) [Det økologiske forbrug i 2006](#). [The organic consumption in 2006]. In Økologisk Jordbrug, October.

2. Other products (oral presentations, public meetings, field days, etc.)

Conferences

- Denver S, Christensen T & Krarup S (2007) Hvad kan vi mere præcist sige om det danske marked ud fra GfK data? A presentation of preliminary results of the CONCEPTS WP1 study to a meeting of consumer researchers assembled to present and discuss possible contributions to a white paper on future development of the organic sector in Denmark. University of

Copenhagen: Institute of Food and Resource Economics, May 30th, 2007. 100% financed by DARCOF.

- Karsten Klint Jensen: "Corporate Responsibility", EURSafe, Oslo 2006.*
- Karsten Klint Jensen: "Sustainability and Precaution" (Invited), 57th Annual Meeting of the EAAP, Antalya 2006.*
- Karsten Klint Jensen: "Sustainability and Uncertainty", ASPA 17th Congress, Alghero 2007.*
- Karsten Klint Jensen: "Organic Farming: For the Sake of Nature", accepted for EURSafe, Wien 2007.*
- Katherine Jensen: Hvem er de økologiske forbrugere, og hvad efterspørger de? Halvårsmøde i Økologisk Landsforening, Kalø, 2007.*
- O'Doherty Jensen K, Lund TB, Øllgaard G (2007): Hvorfor køber folk økologi? [Why people buy organic foods]. A presentation of results of the CONCEPTS WP1 qualitative study to a meeting of consumer researchers assembled to present and discuss possible contributions to a white paper on future development of the organic sector in Denmark. University of Copenhagen: Institute of Food and Resource Economics, May 30th, 2007. 100% financed by DARCOF.
- O'Doherty Jensen K., Lund T.B., Andersen L.M., Christensen V., Krarup S., Christensen T., Denver S., Hinborg H., Bossen H. & Øllgaard G. (2007) Hvorfor folk efterspørger økologi og hvad de efterspørger [Why the demand for organic foods and what is demanded]. A presentation of the results of a preliminary analysis of survey data, designed to test hypotheses arising from a foregoing qualitative study, presented to a joint meeting of the National Organic Association and DARCOF: Growth, Development and Integrity of the Organic Sector, School of Organic Agriculture, Kalø, Sept. 27th-28th. 100% financed by DARCOF.

Other

- Øllgaard G., Engberg N., Lund T.B., O'Doherty Jensen (2007): Mad og økologi – forbrugernes praktiske tænkemåder. Et internt notat: Foreløbige resultater [Organic Food – Consumers practical mind-sets. An internal report of preliminary results] pp. 28. 100% financed by DARCOF.

* 25-75% financed by DARCOF

** 5-25% financed by DARCOF

F. Scientific education

A PhD project is being formulated for Sigrid Denver. An official starting time for enrolling as a PhD student at the University of Copenhagen is expected to be November 2007. The supervisors are known as follows: Main supervisor Peter Sandøe (KU), co-supervisors Jørgen Dejgård Jensen (FOI) and Jacob Nielsen Arendt (SDU).

G. National and international cooperation

In the project, we have appointed a reference group (scientific advisory board) with which the project group meets in order to discuss methods and results. Moreover, we have appointed a *coordination group*, responsible for holding meetings and arranging presentations of ongoing work twice a year. The coordination group has the following members:

- Helle Bossen, Økologisk Landsforening
- Thomas Roland, Forbrugerrådet
- John Thøgersen, Aarhus School of Business, Aarhus Universitet
- Niels Heine Kristensen, DTU
- Jan Holm Ingemann, Økonomi, Politik og Forvaltning, Aalborg Universitet
- Kirsten Lund Jensen, Dansk Landbrug
- Mette Jensen & Anne Holst Andersen, DMU, Aarhus Universitet
- Tove Christensen, Peter Sandøe, Karsten Jensen, Sigrid Denver & Katherine Jensen, KU
- Lars Gårn Hansen, Laura Mørch Andersen, Sinne Smed & Signe Krarup, AKF

In relation to the philosophical discussions on ethics and values related to organic consumption, Peter Sandøe and Karsten Klint Jensen do have continuous contact and discussions with several researchers, including Professor Paul B. Thompson, Michigan State University, Directeur de Recherche Annick Gibon, INRA Toulouse and Director of Research John E. Hermansen, DIAS.

The ongoing work in WP1 and preliminary results from the CONCEPTS project have informed the work undertaken by Thomas Bøker Lund, Katherine O'Doherty Jensen, Sigrød Denver and Tove Christensen, as partners in a concurrently undertaken qualitative and quantitative investigation of the development of demand for organic food on three European markets. The latter study is part of an EU-funded research project (Quality Low Input Food). These studies reciprocally inform each other, and results regarding the Danish market are regularly discussed with partners at the University of Aberystwyth and University of Newcastle, UK and University of Ancona, Italy.

Critical reflection on the project

This project distinguishes itself by combining information on observed consumer behaviour with information on underlying conceptions and values. The project aims to generalise its results to the Danish population as well as to undertake analyses in depth. For this reason, we employ quantitative as well as qualitative methodological approaches in the fields of social science (sociology and economics).

The project utilises information at the individual household level, which makes a detailed and informative approach possible. In this project, we bring four approaches into play, all using household panel data and the same theoretical and modelling frameworks. The four main methodological approaches are

- unique household panel data in combination with
- focus groups and personal interviews,
- questionnaire data, elicited from panel members, and quantitative content analysis,
- choice experiments.

Each approach offers a range of data and serves different purposes. Qualitative methods yield analyses in depth, while quantitative methods facilitate generalisation. Household purchase data are employed in a retrospective analysis, and for this approach the advantage is the possibility of analysing real-life effects of changes that have already taken place. Choice experiments are applied in a prospective analysis, and for this approach the advantage is the possibility of analysing the effects of carefully designed and controlled information provision in a systematic way. They also allow the possibility of analysing consumer evaluations of possible future product types.

Qualitative methods are useful for elucidating the background for and character of particular attitudes, concepts and/or practices, e.g. purchasing patterns, for revealing underlying motives, values, experiences etc. Personal interviews are used in this project for exploratory purposes, in order to generate insight into the life-world of individual consumers/citizens and to generate hypotheses regarding factors underlying changes in practices that can be tested by the later use of quantitative methods. Focus-group interviews exploit the dynamic interaction between the participants structured around a given issue, and will also serve an exploratory purpose in the present study. The quantitative methods include two surveys by postal questionnaire and analyses of the GfK household panel data set which includes information on daily purchases of a large variety of organic and conventional foods, as from 1997 and thereafter. In addition, background variables such as socio-demographic characteristics and media habits are registered for each household member. Questionnaires are and will be sent to the same sample/panel of households and will reveal concepts, values and attitudes that can be subsequently analysed in relation to data regarding behaviour. This combination is unique and has already been successfully applied in FØJØII project III.1 Following up this earlier work with the new questionnaires and comparing new results with results from our previous questionnaire, we will be able to link changes in behaviour with changes in underlying concepts, attitudes and values as well as changes in the social situation of the household.

The media analysis to be undertaken consists of a quantitative analysis of selected media (news programmes in two Danish broadcasting channels in selected years and a number of newspapers). The content of news stories will be coded on the basis of headline and a summary identifying topic as well as angle and positive/negative valorisation.

8. Budget

A. Account for any change in budgets

B. Budget for the whole project (1.000 DKK)

Total consumption of funds from DARCOF and expected consumption this year and coming years

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	128	13	26	47	41	0	127
Technical personnel	34	2	12	12	13		39

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries	6,677	605	1,440	2,489	2,284	0	6,818
Scientific personnel	5,751	565	1,104	2,185	1,974	0	5,828
Technical personnel	926	40	336	304	310	0	990
Other operational costs	1,156	590	292	317	67	0	1,266
Equipment	0	0	0	0	0	0	0
Others (please specify)	250	0	250	0	0	0	250
Total direct costs	8,083	1,099	1,827	2,806	2,350	0	8,334
Indirect costs (20% of direct costs)	1,617	239	396	561	470	0	1,667
Total	9,999	1,434	2,378	3,367	2,820	0	9,999

Comments:

9. Signatures and stamps

Name	Institute	Date	Signature
Head of project Mette Wier			

Appendix I. Detailed budget

A. Budget for each participating institute (1,000 DKK)

Name of Institute and department:

AKF, Danish Institute of Governmental Research

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	35	4	8	19	16	0	45
Technical personnel	26	2	11	8	8	0	29

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries	2,510	244	723	1,144	959	0	3,070
Scientific personnel	1,755	205	399	891	717	0	2,212
Technical personnel	755	39	324	253	242	0	858
Other operational costs	548	334	48	177	19	0	578
Equipment	0	0	0	0	0	0	0
Others (please specify)	0	0	0	0	0	0	0
Direct costs	3,058	578	771	1,321	978	0	3,648
Indirect costs (20% of direct costs)	612	116	154	264	196	0	730
Total	3,670	694	925	1,585	1,174	0	4,378

Comments:

For 2008 and 2009, AKF's budget is 705,000 DKK higher than in the original budget. This is due to a transfer of tasks in WP3 from IHE to AKF.

C. Budget for co-financing from each participating institute (1,000 DKK)

Name of Institute and department:

AKF, Danish Institute of Governmental Research

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	5	1	1	1	2		5
Technical personnel	1	0.2	0.2	0.3	0.3		1

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel	411	68	83	118	142		411
Technical personnel	41	7	8	12	14		41
Other operational costs	0						0
Equipment	0						0
Others (please specify)	0			319	208		527
Direct costs	452	75	91	130	156		452
Indirect costs (20% of direct costs)	90	15	18	26	31		90
Total	543	90	109	475	395		1,069

Comments:

Due to the transfer of tasks, AKF will co-finance more administrative costs compared to the original budget for 2008 and 2009. This extra co-financing is placed under "Others" in order to track the additional co-financing due to transfer of tasks to AKF.

A. Budget for each participating institute (1,000 DKK)

Name of Institute and department:

Institute of Food and Resource Economics (FOI)

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	40	0	13	15	12		40
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries	1,822		501	696	626		1,823
Scientific personnel	1,822		492	696	626		1,814
Technical personnel			9				9
Other operational costs	311		206	100	5		311
Equipment							
Others (please specify)	250		250				250
Direct costs	2,383		957	796	631		2,384
Indirect costs (20% of direct costs)	477		191	159	126		476
Total	2,860		1,148	955	757		2,860

Comments:

Data purchase of 100,000 DKK for choice experiments will be used in 2008.

Unused resources for 2007 will be used in 2009.

A. Budget for each participating institute (1,000 DKK)

Name of Institute and department:

CeBRA, Institute of Food and Resource Economics (FOI), Faculty of Life Sciences – University of Copenhagen

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	5	2	3				5
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel	210	83	127				210
Technical personnel							
Other operational costs	41	13	28				41
Equipment							
Others (please specify)							
Direct costs							
Indirect costs (20% of direct costs)	50	19	31				50
Total	301	115	186				301

Comments:

C. Budget for co-financing from each participating institute (1,000 DKK)

Name of Institute and department:

CeBRA, Institute of Food and Resource Economics (FOI), Faculty of Life Sciences – University of Copenhagen

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	2	1	1				2
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel	146	72	74				146
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Direct costs							
Indirect costs (20% of direct costs)	29	14	15				29
Total	176	87	89				176

Comments:

A. Budget for each participating institute (1,000 DKK)

Name of Institute and department:

Department of Human Nutrition (IHE), Faculty of Life Sciences - University of Copenhagen.

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	32	7	2	6	6		21
Technical personnel	2	0	0.5	1	1		3

Year:	Original budget Total	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel	1,517	277	86	274	298		935
Technical personnel	68	1	3	8	8		20
Other operational costs	257	243	10	20	23		296
Equipment							
Others (please specify)							
Total direct costs	1,842	521	99	302	329		1.251
Indirect costs (20% of direct costs)	368	104	20	60	66		250
Total	2,210	625	119	362	395		1.501

Comments:

During 2008, IHE will have extra costs from recruiting personal to carrying out interviews. We therefore request to move 130,000 DKK from the budget for salaries expenses to the operating budget in 2008.

C. Budget for co-financing from each participating institute (1,000 DKK)

Name of Institute and department:

Department of Human Nutrition (IHE), Faculty of Life Sciences, University of Copenhagen.

Year:	Original budget Total	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel		3	6	4	4		17
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel		132	268	192	196		788
Technical personnel				8	8		16
Other operational costs				20	23		43
Equipment							
Others (please specify)							
Total direct costs				220	227		847
Indirect costs (20% of direct costs)				44	45	-	89
Total				264	272	-	936

Comments:

A. Budget for each participating institute (1,000 DKK)

Name of Institute and department:

Danish National Environmental Research Institute (NERI), Department for Policy Analysis (SYS)

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel	14			7	7		14
Technical personnel	7			3	4		7

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries	760			367	392		760
Scientific personnel	657			324	333		657
Technical personnel	103			43	60		103
Other operational costs	40			20	20		40
Equipment							
Others (please specify)							
Total direct costs	800			387	412		800
Indirect costs (20% of direct costs)	160			77	82		160
Total	959			465	495		959

Comments:

C. Budget for co-financing from each participating institute (1,000 DKK)

Name of Institute and department:

Danish National Environmental Research Institute (NERI), Department for Policy Analysis (SYS)

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Man-months							
Scientific personnel							
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Expected consumption 2007	2008	2009	2010	Total
Salaries							
Scientific personnel				314	325		639
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Total direct costs							
Indirect costs (20% of direct costs)							
Total				314	325		639

Comments: