

Progress Report 2004 and Application for Continuation in 2005

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The Directorate for Food, Fisheries and Agro Business
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1. Research program

Research in organic farming 2000-2005 (DARCOF II)

2. Project title and number

Organic Agriculture in Social Entirety - Principles versus Practices (OASE)

DARCOF project no.: III.9

3. Head of project

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4. Participating institutes

Technical University of Denmark (DTU), IPL/Innovation and Sustainability

5. Other project staff

Research group (Danish Technical University (DTU))

Thorkild Nielsen, Assistant Professor
Niels Heine Kristensen, Associate Professor,
Mette W. Hansen, PhD student

6. Project period (month, year)

Start of project: May 2002
End of project: Marts 2005

7. Midterm description of the project, its results and progress, and application for continuation in 2005

A. Project summary

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

No.	Work package title	Start	End	Deliverable no(s):
1 B	Principles versus practices – organic food sector	Feb. 2002	2002	7
2 B	Basic explanations – organic food sector	Mar. 2003	2005	13,14

B. Objectives and expected achievements

The initial objective in this project is to analyse the mismatches between values and praxis in the organic food sector, with special focus on the processing sector. The intension of the project-design was initially that the first part should analyse the values in organic agriculture. When the partner responsible for this part (WPA), for different reasons, decided to leave the project, some adjustments had to be done.

Firstly the changes mend that the focus of the project shifted to a more sector oriented perspective, and that the focus shifted to the last parts of the food chain. Secondly the organisational changes mentioned above had the consequences that the initial research question has been narrowed to “identify mismatches between praxis and values in the organic food industry”.

Finally the changes have influenced the initial project tempi. This means that methodological the project will finish the data collection (praxis of the food processing) and finally analyse this data with focus on the values in the organic food production, and these analysis should use the work from other researchers, who has worked with general organic principles.

C. Midterm results and progress

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

WP 1B and WP 2B

The requirements for processing in standards and regulations are only related to technical subjects directly oriented towards the production of the products. A broader view on social aspects in the processing company or the environmental influence of the processing units is not part of any governmental regulations for organic foods.

Historically organic food processing was often associated with a more human-oriented technology frequently described as “appropriate technology”.

The term or concept “appropriate” or “intermediate” technology has been a term mainly used in the seventies of the last century. Although nowadays the term seems to be almost “old-fashioned” this concept has interesting elements to consider when speaking about organic food processing and sustainability. During that time several scientific groups have worked on this concept.

Appropriate technology is used to solve technological problems by providing sustainable solutions which are beneficial to local communities, and which are reducing environmental pollution by using renewable sources of energy and recycling materials wherever possible

Appropriate technology is primarily a small-scale technology. It is structured in such a way that people can manage and implement it at local level. Appropriate technology makes use of skills and technologies that are available or can easily be adopted on small scale levels. Typical aspects of appropriate technology are: Decentralized, Technologically sophisticated, though simple in design, Environmentally friendly and Socially integrated.

Several aspects of appropriate technology are in line with the aims of organic agriculture. But appropriate technology is focusing much more on the social and ecological aspects of food processing than on the purely technical aspects. Regionality of the production, size of the processing units, flexibility of the units, consequences for the job market, environmentally oriented optimization of the whole food chain and ownership are main elements of appropriate technology. These could be important elements for the advanced development of organic food processing and will need further consideration. Some organic food projects already follow this approach in practice.

In several standards, guidelines and publications, organic food processing is strongly associated with “minimal processing” and “careful processing”. The concept has been used in several standards for organic food of careful processing: Private ecological standards, Soil Association, Codex A., EU regulation. For example the standards of Soil Association give the following description: ”The basis of processing organic products is that its vital qualities are maintained throughout each step of the process. This is achieved by a combination of: Choosing and developing methods which are adequate to the specifics of the ingredients. Developing standards which emphasise careful processing methods, limited refining, energy saving technologies, minimal use of additives and processing aids etc.”. It is interesting that also the guidelines for organically produced food in the Codex Alimentarius refer to “careful processing methods”

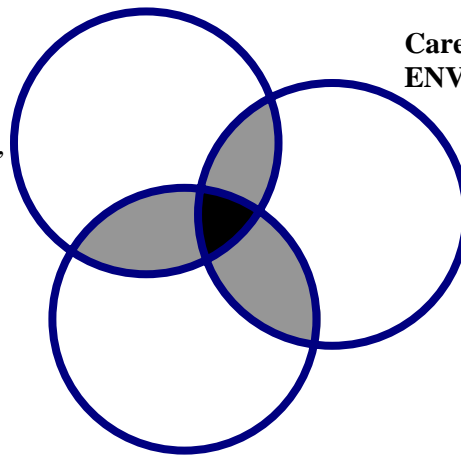
The integrity of the organic product must be maintained throughout the processing phase. This is

achieved by the use of techniques appropriate to the specifics of the ingredients with careful processing methods limiting refining and the use of additives and processing aids. Ionising radiation should not be used on organic products for the purpose of pest control, food preservation, and elimination of pathogens or sanitation. A much broader definition of careful food processing is illustrated below.

Although there exists no clear common definition of the concept of “careful processing”. “Care” is an essential value in organic food production encompassing care for the product, the environment and the people. In relation to the production of organic food, this is manifested, for example, the fact that significantly fewer additives are allowed. Such restrictions for organic food production, together with food producers', retailers' and consumers' interpretation of the concept of care, has resulted in the production of some organic foods (e.g., cheese, bread) which are innovative and apparently exercise more care than this is the case for the same non-organic products.

Carefulness to the PRODUCT

Processing methods/ assessment, nutrition, taste, shelf life, ethics, traceability



Carefulness to the ENVIRONMENT

Cleaner technologies, LCA, energy, water, waste

Carefulness to the PEOPLE

Working environment, assessment of working conditions, organisation of work, education, competencies,

Figure 1. The broad definition of careful processing.

There is a need to systematise and evaluate these changes in processes and products so that they become more accessible to food producers in general. The broad definition of careful processing (product, people and environment (see fig 1) could be a useful concept to develop a broader understanding of organic food processing.

Below we have presented some very provisionally conclusions. In the future we some challenges for Processing Organic Food:

- Credibility and authenticity of Organic Food has to be maintained: *more focus on impact of processing methods/ technologies on quality and environment*
- Concept of ” organic convenience” *has to be further developed*
- Necessities of careful evaluation of new additives.
- Keep diversity of tastes corresponding to the diversity of life-styles: *cultural, regional and social dimensions of food*
- Develop a system approach for Processing Organic Food: *link the genuine properties of the raw material with an appropriate processing*

- Competition of Organic Food with “functional food” with regard to health benefits: *better communication of the benefits of Organic Food.*

C.2 Fulfilment of deliverables and milestones

M1 Workshop I	April 2002	Fulfilled
M3 Seminar I (shared with WP2A)	Nov 2002	Fulfilled
M7 Presentation of compilation at seminar I (shared with WP1)	Nov 2002	Fulfilled
WP number and title 1B, Principles versus practices – organic food sector - DTU	Time schedule according to application	Deviations, if any*
D7 Working paper on key-informants assessment	Feb 2003	Several minor
M 5 Seminar with organic food sector	Aug 2002	Fulfilled
WP number and title 2 B, Basic explanations – organic food sector - DTU	Time schedule according to application	Deviations, if any*
D 13 Proceedings from International Seminar	May 2004	The International seminar is expected to take place in February 2005
D 14 Article for International journal	June 2004	One article about innovation and network in a Danish organic company has been published. The draft key paper is planned in 2005
M 12 Dialogue workshop	Sep 2003	Fulfilled but new workshops are planned
M 13 International seminar	Nov 2003	See D 13

D. Description of deviations and subsequent adjustments of plans

The main reason for the deviations in this project is that the project actually was stopped for a period. When the partner responsible for WP A decided to leave the project in December 2003 several ideas was discussed. When DARCOF and the remaining partner in the project agreed to finish WP B almost three month had gone.

Another reason for the deviation is that it has been impossible to speed the data collection up. We have been dependent on the resources and time from mainly small and medium sized organic processors with very few resources. It has been impossible to get through all the interviews in the scheduled time. Furthermore we have decided to make interviews with companies in Germany and Nederland. This has been more time consuming. Actually we still have two interview/visits to finish (HIPP and Lammsbräu). It was planned before summer, but unfortunately cancelled. These interviews are of special interest because these companies have a long tradition in value setting and especially in the field of environmental issues they have developed the companies value side since middle of the nineties.

In the list below we have shown the publication strategy of the last part of WPB:

- Working paper from the seminar on processed organic foods and stakeholder analysis
- Working paper about organic principles and values in relation to organic processed foods
- Article in an International Paper about values and practise in processed organic foods.

- “Popular” scientific article published in a national paper (one is already finished, but more have been planed)

We will seek to place The International seminar about “organic food processing” in connection to ”BioFach 2005” in Nuremberg, Germany the 24th – 27th of February. The will be planed together with colleagues from Switzerland and Germany. For this reason it can be necessary to adjust the time schedule.

E. Project publications and other products

1. Articles in international, scientific journals with review procedures

Rasmussen, L. B., Nielsen, T.: Entrepreneurial Capabilities. IN *AI & Society*, vol. 18 no. 2, London, 2004.

Ingemann, Jan Holm (2002) Rural-urban co-development - challenges to post-industrial society, in Magid, Jacob, Eds. *Urban Area – Rural Areas and Recycling – The organic way forward?*. Report. Danish Research Centre for Organic Farming.

2. Papers presented at congresses, symposiums, etc.

Kristensen, N.H.: Lecture at Research School for Organic Agriculture and Food Systems. “Analyzing actor perspectives on sustainability in food chains”, Summer school, September 2004 [Still not presented on Organic eprint]

3. Reports, articles in agricultural journals, etc.

Nielsen, T.: Minimal and careful processing, in Schmid, O.; Beck, A. and Kretzschmar, U. (editors): *Underlying Principles in Organic and “Low-Input Food” Processing*, Switzerland, 2004 [Still not presented on Organic eprint]

Nielsen, T.: Underlying principles and actual problems for the processing of organic meat products in Schmid, O.; Beck, A. and Kretzschmar, U. (editors): *Underlying Principles in Organic and “Low-Input Food” Processing*, Switzerland, 2004 [Still not presented on Organic eprint]

Kristensen, N.H; Beck, A: Sustainable processing, in Schmid, O.; Beck, A. and Kretzschmar, U. (editors): *Underlying Principles in Organic and “Low-Input Food” Processing*, Switzerland, 2004 [Still not presented on Organic eprint]

4. Oral presentations, public meetings, field days, etc.

Oral presentation in Budapest at the seminar: Processing of organic foods in EU (Thorkild Nielsen)

Kristensen, N.H.: Oral presentation on a theme day (“Organic to the People”) at MATFORSK in Ås, Norway: “Danish experiences, October, 2004 [Still not presented on Organic eprint]

Ingemann, Jan Holm (2002) The efficiency myth [Forestillingen om det effektive landbrug]. Paper presented at Greening the CAP - why and how?, Stockholm, 8 february 2002,

Johansen, Pia Heike and Ichihara, Saki (2002) Discussion Paper for "Changes in interpretation of basis principles" (Draft). Arbejdspapirer no. 2002:2, Aalborg University, Institut for Økonomi, Politik og Forvaltning.

F. Scientific education

G. National and international cooperation

OASE is partner in an Integrated Project under the 6th. Framework. In a subproject the research group is focussing on the processing practices of some selected branches. Partners from Switzerland, Finland, Germany is participating.

OASE is also participating in an other EU project under the 6th. Framework with special relevance to this project. The project "Ethical Traceability and Informed choice in Food Ethical Issues" also focus on values in food production. The project will specific analyse three selected organic supply chains. The project started in October 2004.

H. Critical reflection on the project

We have realised that we might run into some theoretical and methodological challenges in the final part of the project. First we have to be very specific on which principles we are going to compare the praxis of the food processing companies. Secondly we also should take into consideration that some of these companies, especially the larger and established companies really don't consider themselves to be a part of the organic history and value orientation. But this is of course also an interesting conclusion.

8. Budget

A. Account for any change in budgets

Changes primarily due to delay and to transfer from scientific personnel to technical personnel.

B. Budget for the whole project (1.000 DKK)

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

Year:	Consumption before 2003	consumption 2003	Expected 2004	Expected 2005	Total
Man-months	18	22,3	10	2,5	52,8
Scientific personnel	14	23	6,5	1,5	45
Technical personnel	14	6,3	2	1	23,3

Year:	Consumption before 2003	Expected consumption 2003	2004	2005	Total
Salaries Scientific personnel	316	455	104	24	899
Technical personnel	68	104	12,5	12,5	197
Other operational costs	90	150	18	5	263
Equipment					
Others (please specify)					
Direct costs	474	709	134,5	41,5	1359
Indirect costs (20% of direct costs)	95	142	27	8	272
Total	569	851	161,5	49,5	1631

Comments:

9. Signatures and stamps

Name	Institute	Date	Signature
Head of project Thorkild Nielsen	Technical University of Denmark		

Appendix I. Detailed budget

A. Budget for each participating institute (1.000 DKr)

Name of Institute: AAU

Year:	Consumption before 2003	Expected consumption 2003	2004	2005	Total
Scientific personnel	23,6	14,8			38,4
Technical personnel	10	9			19
	13,6	5,8			19,4

Year:	Consumption before 2003	Expected consumption 2003	2004	2005	Total
Salaries Scientific personnel	253	346			599
Salaries Technical personnel	63	97			160
Other operational costs	75	98			173
Equipment					
Others (please specify)					
Direct costs	391	541			932
Indirect costs (20% of direct costs)	78	108			186
Total	469	649			1.118

Comments:

C. Budget for co-financing from each participating institute (1.000 DKK)

Name of Institute: DTU

Year: DTU	Consumption before 2003	Expected consumption 2003	2004	2005	Total
Scientific personnel	4,4	7,5	10,0	2,5	24,4
Technical personnel	4,0	7,0	6,5	1,5	19,0
	0,4	0,5	1,0	1	2,9

Year:	Consumption before 2003	Expected consumption 2003	2004	2005	Total
Salaries Scientific personnel	63	109	104	24	300
Technical personnel	5	7	12,5	12,5	37
Other operational costs	15	52	18	5	90
Equipment					
Others (please specify)					
Direct costs	83	168	134,5	42	427
Indirect costs (20% of direct costs)	17	34	27	8	85
Total	100	202	161	50	512

Comments: