



Midterm Status Report 2003 and Application for Continuation in 2004

For research projects financed by grants from
The Directorate for Food, Fisheries and Agro Business
under the Danish Ministry of Food, Agriculture and Fisheries

1. Research program

Research in organic farming 2000-2005 (DARCOF II)

2. Project title and number

V Co-ordination, synergy and education – increasing the width and depth of research in organic farming

3. Head of project

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4. Participating institutes

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6. Project period (month, year)

Start of project: 2000
End of project: 2005

7. Midterm description of the project, its results and progress, and application for continuation in 2003

A. Project summary

The Danish Research Centre for Organic Farming (DARCOF) is a "centre without walls", which is to say that the researchers remain in their own research environment but collaborate across institutes. The overall remit is to coordinate Danish R&D for organic farming, with a view to achieving optimum benefit from the allocated resources.

The specific objectives of the SYNERGY project are to secure the continued interdisciplinary development of Danish research in organic farming and to explore the many possibilities of synergy in DARCOF II.

In relation to these objectives, the assignments of SYNERGY are to:

- Co-ordinate, evaluate and manage DARCOF II as a whole
- Analyse, discuss and synthesis knowledge across research projects and disciplines
- Develop research methodology and investigate values associated with organic farming
- Contribute to the education of research scientists involved in the DARCOF II
- Communicate the research findings to the organic farming community and society in general
- Contribute to international co-operation and communication

In this way the project intends to secure the completion of the overall objectives of the programme; namely to contribute to increased production, and closer relationships between organic and inherent qualities in organic farming.

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

No.	Work package title	Participants*	Budget (1.000 DKK)	Start	End	Deliverable no(s):
1	Co-ordination, evaluation and management of the whole programme	Erik Steen Kristensen	1.900	2000	2005	D1-D2
2	Synthesis of knowledge	Erik Steen Kristensen	5.300	2000	2004	D3-D4
3	Systems research methodology and value inquiry	Hugo Fjelsted Alrøe	900	2000	2004	D5-D9
4	Education of postgraduate students (Ph.D.'s)	Erik Steen Kristensen	7.800	2000	2005	D10
5	National communication and mediation	Claus Bo Andreassen	2.400	2000	2005	D11-D31
6	International co-operation and communication	Claus Bo Andreassen	2.000	2002	2005	D32-D40

B. Objectives and expected achievements

The overall objective of DARCOF II is to contribute to increased production, and closer relationships between organic and inherent qualities.

The principal objectives of this project is thus to

- I exploit a unique opportunity to synthesise and communicate relevant scientific information across traditional scientific boundaries and disciplines, and to
 - II improve both the width and depth of research in organic farming
- The objective of the individual WP's:

- WP1:** To coordinate, evaluate and manage all research projects in accordance with the overall objectives of the whole programme, to produce knowledge that can be promoted into increased production and closer relationships between organic and inherent qualities of organic foods.
- WP2:** Synthesise information on complex and relevant problems in organic farming in order to:
- a) analyse different aspects of the transition from conventional to organic farming
 - b) identify areas where new research is most needed, and
 - c) clarify complex problems
- WP3:** To establish a general framework (a "research paradigm") for research in organic agriculture, involving systems research methodology and value inquiry, in order to:
- a) promote co-ordination and collaboration between different research groups and disciplines (WP1)
 - b) facilitate the elaboration of conceptual models for synthesis of knowledge (WP2) and communication (WP5 and WP6)
 - c) investigate and clarify the interplay of values and facts in research and practice
- WP4:** Contribute to the postgraduate education of ph.d.-students and researchers in the disciplines and research areas of greatest relevance to organic farming.
- WP5:**
- a. To strengthen the interdisciplinary research and contribute to synergy through increased collaboration between research groups and institutes dealing with organic agriculture
 - b. To ensure mediation to the organic sector and to strengthen the relevance and the holistic perspectives through increased collaboration with the users of research in organic farming
 - c. To employ the synergy of research knowledge resource purpose etc. in both organic and sustainable agriculture
- WP6:**
- a. Contribute to international exchange of research results in organic farming
 - b. Secure that the Danish research in organic farming is at a high international level
 - c. Improve knowledge about the EU research programme system and contribute to development of international research co-operation in organic farming.

C. Midterm results and progress. Description (summary) of main results and conclusions

WP1. Co-ordination, evaluation and management

23 research projects that was initiated and granted in 2000 have all started up and progressing quite well. In two projects (I.3 and I.2) supplementary WP's was granted in spring 2001 in order to fulfil further targets. At the same time more resources were allocated to knowledge synthesis (WP2, 2.000 KKr) and education (WP4, 5.000 KKr.) in this project. According to this the name of the project has been changed to " Synergy, co-ordination and Education".

In spring 2001 6 new proposals has been prepared and granted by the Food Ministry. Also these projects are well initiated. At the end of October 2001 there are totally 30 projects and with a total budget on 170 mill. DKr. established in DARCOF II.

In autumn 2001 and spring 2002 14 complementary projects has been prepared and granted by the Ministry of Food, and at the end of September 2002 there are totally 43 projects with a total budget on 227 mill. DKK.

In May-June 2002 all projects established in 2000 and 2001 were visited by 1-3 persons from the secretary. Similarly all projects established in 2001 and 2002 were visited in May-June 2003.

WP1: Co-ordination, evaluation and management	Time schedule according to application	Deviations, if any*
Deliverables		
D1 Holding annual status meetings in November each year	November 2000 and 2001, 2002, 2003	Evaluated in written procedure and individual visits
D2 The progress and results of DARCOF II will be described through annual status reports	November 2000, 2001, 2002, 2003	✓
Milestones		
M1 95% of projects in DARCOF II has been initiated	December 2001	✓
M2 The status reports have been accepted	March 2001, March 2002, 2003	✓

* *Deviations are to be further discussed in D*

WP2 Syntheses of knowledge

The results of the 3 knowledge synthesis initiated in 2000 (task 1, 2 and 3) has been published in FØJO reports no. 8, 9, and 14. These results has been very valuable in the establishments of the new research projects in DARCOF II. Preliminary results from task 6 and 7 has been very help full in preparing the new research programme on organic GMO-free seed. The results has been published in FØJO-report no. 15 and 16. In June 2002 task 5 was initiated. Project description appears at www.okoforsk.dk.

WP2: Synthesis of knowledge	Time schedule according to application	Deviations, if any*
Tasks		
1: Regional protection of groundwater with organic farming	Jan.-Oct. 2000	✓
2: Organic food and human health	Jan. 2000-Jan. 2001	✓
3: Organic pig production – animal health and welfare	Apr.-Oct. 2000	✓
4: Nature quality in organic farming, on local an regional levels	Apr.-Oct. 2000	✓
5: Energy use in organic farming	Nov. 2001 Nov. 2002	June 2002 – Dec. 2004
6: Organic plant-breeding	Nov. 2000 Nov. 2001	✓
7: Consequence of GMO for organic farming	Jan. 2001 Nov. 2001	✓
Deliverable		
3: DARCOF reports has been delivered for task 1, 3 and 4	Dec. 2000	✓
4: DARCOF reports has been delivered for task 6 and 7	Dec. 2001	Dec. 2001, May 2002
Milestones		
M3 Areas where new research is most needed has been identified in task 1, 2, 3 and 4	Oct. 2000	✓

M4	Areas where new research is most needed has been identified in task 6 and 7	Sept. 2001	✓
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Wp3 Systems research methodology and value inquiry

There is ongoing work on the further development of systems theories in agricultural research in cooperation with, in particular, Egon Noe (Dept. of Agricultural Systems, DIAS). The development of the concept and practice of animal welfare in organic farming is done in cooperation with Mette Vaarst (Dept. of Animal Health and Welfare, DIAS), Henk Verhoog (Louis Bolk Institute, Holland) and Vonne Lund (Dept. of Animal Environment and Health, Swedish University of Agricultural Sciences). The development of the concept of nature quality in organic farming has continued in cooperation with Knud Tybirk and Pia Frederiksen (National Environmental Research Institute, Denmark). See the publication for details.

The more theoretical work is being implemented by us and by others. The procedures for the midterm evaluation of DARCOF II in 2002 and 2003 has been adjusted to reflect the work done on systemic research methodology - a new section on critical reflection has been added to the status report and reflexive objectivity has been included as one of the criteria for evaluation. In DARCOF II project I.7, Per Schjøning (Dep. of Crop Physiology and Soil Science, DIAS) – together with colleagues Susanne Elmholt and Bent T. Christensen – has edited an international book on soil quality as related to the major challenges in modern agriculture. The directing chapter, authored by the editors, utilizes the key concepts from the work on systemic research methodology. DARCOF project III.9, led by Jan H. Ingemann (Aalborg University), has taken up the three organic principles, that were suggested by DARCOF's secretariat in November 2000, and used them as a basis for their work on the possible mismatch between principles and practice. Hugo Alrøe has been included in the Delphi expert panel of that project. A widespread discussion of the organic principles was initiated in Denmark when the DARCOF secretariat in November 2000 prepared a discussion paper to the user committee of DARCOF.

The discussion on organic principles is now taken up by other countries and, recently, by IFOAM, who has invited Hugo Alrøe to participate in a task force on the rewriting of IFOAM's Principles of Organic Agriculture. Inquiry into the basic values of organic agriculture is also in focus in a new EU project "Research to support revision of the EU Regulation on organic agriculture", which is led by DARCOF. Hugo Alrøe will be leading a work package on "Identifying and integrating basic ethical values of organic agriculture in the development of EU regulation".

The work in this work package has been presented in national and international fora (see the publications list), and the researchers involved are often invited to speak and teach on the subjects of systemic research and organic principles. See the publications for details.

Lately, much work has gone into establishing an electronic archive for papers related to organic agriculture, called Organic Eprints (www.orgprints.org) as a very practical implementation of research methodology in its widest sense (see WP6 for further details).

WP3: Systems research methodology and value inquiry	Time schedule according to application	Deviations, if any*
<i>Deliverable</i>		
D5 Contributing to report on follow-up workshop on research methodology in organic farming	2002-2003	(✓)
D6 Contributing to report on the knowledge synthesis "Quality of nature in organic farming"	2001	✓
D7 Writing and submitting one or more international papers each year	2001-2004	✓
D8 Writing or contributing to Danish papers on DARCOF activities involving systems research methodology and value inquiry	2002-2004	✓
D9 Establishing an international electronic forum for dialogue on systems research methodology and value inquiry in agricultural research	2003-2004	(✓)

<i>Milestones</i>		
M6 Presentation of a general framework (a "research paradigm") for research in organic agriculture	2004	(✓)

WP4 Education of post graduate students (Ph.D.'s)

Year 2001 was busy in making a procedure for evaluation and selection of the most qualified candidates within the most relevant topics. In order to be able to stimulate the maximum no. of Ph.D.-students and at the same time cover as many topics as possible it has been decided to offer shared cost scholarships.

26 Ph.D. projects have been established. At present 24 Ph.D. projects are in progress. 2 students has stopped due to new positions.

During the summer 2001 the Research School for Organic Agriculture and Food Systems (SOAR) was established with a base at The Royal Veterinary and Agricultural University. DARCOF is supporting SOAR and alle the Ph.D.-students has an obligation to take part in SOAR.

The progress reports for the students co-financed by DARCOF can be seen at <http://www.okoforsk.dk/funktion/udd/phd/index.html>

<u>Name of student</u>	<u>Title of Ph.D.-project</u>
Achmed El-Naggar	Effect of using water extracts on compost and organic materials on soil fertility and plant nutrition
Anders Pedersen	Optimisation of nitrogen use efficiency in organic vegetable production
Annette N. Jensen	Bacterial infection risk associated with outdoor organic pig production with special reference to Salmonella and Campylobacter infection
Bjørn Molt Petersen	Modelling of processes at the farm level, with special emphasis on nitrogen and carbon slow and turnover
Chris Kjeldsen	Organic food networks and sustainable development
Christina E. Adamsen	Organic meat processing – non-nitrite alternatives to conventional meat curing
Dorte Bodin Dresbøll	Optimization of growing media for organic greenhouse production
Dorthe Elle Ilsøe	Consumer demands on organic food products
Elisabeth Christine Fossing	Application of alternative medicine in organic dairy herds with special emphasis on the effect of veterinary
Gregor Levin	Landscape changes under ecological farming
Helena Mejer	Management and alternative crops as a means to reduce parasite infections in organic pig production systems
Jeanette Hyldal Vollmer	Modelling development of disease complexes on barley cultivar mixtures under organic farming practice
Kamma Westergaard	Økologisk jordbrug, driftspraksis og landskab
Kirstine F. Jørgensen	The importance of nutritional factors and the physiological background for the development of liver abscesses in veal calves and young bulls – Perspectives for organic beef production
Klaus Horsted	Strategies for increased foraging in organic layers
Lene Hegelund	Control systems inorganic egg production, focusing on animal welfare and food security
Maj-Britt Quitzau	Cultural barriers and potentials for recycling of human town-waste
Martin Nørgård Hansen	Technology for reduction of nitrogen loss and environmental effects of solid manure systems
Mette Klindt Andersen	Competition and complementarity between intercropped barley, rape

	and field pea in ecological cropping systems – the role of plant available nitrogen and sulphur as well as cropping design
Mette Thyme	Production of N ₂ O in grass-clover pastures
Mette Weinreich Hansen	Empowerment of organic enterprises – values, identity and learning in food processing
Nicoline Maag Eigaard	Investigation on mortality and interactions of selected diseases in free-range chickens
Paul Rye Kledal	Future supply and marketing strategies in the Danish organic food sector
Preben Klarskov Hansen	Crop-Weed interactions determined by sensor techniques
Thomas Larsen	Soil ecological studies of decomposition of urban fertilisers
Tina Lund-Nielsen	Production of high quality organic milk considering the future demands for use of organically produced feed and natural vitamins

WP4: Education of postgraduate students (Ph.D.'s)	Time schedule according to application	Deviations, if any*
<i>Tasks</i>		
11 Initiate and contribute financially to postgraduate education in co-operation with relevant Danish research environments	2001, 2002, 2003	✓
<i>Deliverable</i>		
D10 Descriptions of Ph.D. scholarship	2001-2002	✓
<i>Milestones</i>		
M7 Announcement and assignment of Ph.D. scholarships	2001, 2002, 2003	✓
M8 Approval of Ph.D. degrees	2004	

WP5 Communication and mediation

Task 12 -15

Work on securing high levels of communication internal between institutes and research groups and externally between research and the various users groups are continuing. The Danish newsletter from DARCOF was transformed to an electronic version (FØJOenyt) in January 2003. This made an immediately dramatically reduction in subscribers from 1.500 to 350. However during the year 2003 subscribers has increased so in November 2003 there was 718 subscribers.

In the following it is described how the individual task contributes to the objectives of the work packages and the programme as a whole.

WP5: Communication and mediation	Remarks
Task 12: International research communication	Task 12 is together with D11 - D16 moved to the new WP6
Task 13: Internal communication	See D17 - D19
Task 14: Mediation and external communication	See D20 - D30
Task 15: Policy advice etc.	See D31
<i>Deliverable</i>	
D11 - D16	These deliveries have been moved to WP6

D17 Internal newsletter aimed at researchers, institutes and organisations participating in DARCOF	8 issues issued in 2001 7 in 2002, 6 in 2003
D18 Internal workshops, seminars etc. aimed on development of research and collaboration between research groups	No internal seminars in 2001 Midterm evaluation 23 October 2002 Workshops in April and Dec. 2003
D19 Developing DARCOF's internet communication to support internal communication	The site okoforsk established May 2002
D20 Publishing reports, which intend to synthesis and mediate research in organic agriculture	10 major reports together with a number of proceedings
D21 External newsletter on new research results, new projects, new publications, meetings, workshops etc.	5 issues each year
D22 Initiating seminars etc. to give researchers, farmers, advisers etc. possibilities to discuss ongoing and future research	In 2001 four national meetings has been conducted. DARCOF participates in the conduction of the national organic congress in November 2002 in Odense
D23 Holding field demonstrations to present ongoing research activities to farmers, advisers etc.	6 field walks /demonstrations with app. 700 participants 2001, 2002
D24 Research information on organic agriculture in Danish agricultural magazines	Monthly articles in 5 national magazines
D25 Annual reports giving an overall view on research in organic agriculture	A biannual report are available together with a Danish version of this status report edited for Danish research users
D26 Information materials giving an introduction to the overall research and specific projects	Information materials are available
D27 Increasing its activities on the Internet to improve possibilities for seeking information about research in organic agriculture	A new site has been constructed. The Organic Eprints archive has been established as another, growing source of information.
D28 Re-establishing DARCOF's travelling exhibition in order to provide information about research in organic farming at agricultural shows, environmental congresses etc.	Posters on the individual project has been made
D29 Disseminating knowledge about organic agriculture in newspapers, electronic media etc.	Two TV-productions 30 min. each on research in organic farming has been sent on the national Danish TV
D30 Offering "communication services" to participating research groups.	Done on a routine basis
D31 Contributing to national and European investigations and distanglements in connection with preparation of policies for agriculture and environment	Among others, DARCOF has contributed to distanglements on principles for organic farming, food safety

WP6 International research co-operation

At the beginning of year 2002 it was decided to get more focus on international research co-operation in order to contribute to international exchange and research in organic farming and to secure that the Danish research is at a high international level

In 2003 preparation of proposals for EU's 6th Frame Work Programme (FWP 6) has been important. In total 6 proposals has been forwarded during spring and summer 2003. Four has got a good evaluation and are at present in negotiation for financing.

The newsletter DARCOFenews was initiated in February 2003. At the moment there are 380 subscribers.

The electronic archive called Organic Eprints (www.orgprints.org) was opened for deposits in September 2002, in connection with the midterm evaluation. Now, a year later, the archive has 930 articles and receives more than 500 visitors per day. More than 800 users from all over the world have registered in the archive. FiBL has joined the archive as a responsible partner, leading an effort to

compile the most important results and projects conducted in organic farming research in Germany since 2000. A German language interface has been implemented, and the aim is to enter all the studies carried out within the framework of the Federal Organic Farming Scheme. The full research production from the DARCOF II programme is already available in the archive

In the SYNERGY project, the archive can contribute to WP1 by way of documenting the production in individual projects; to WP3 by way of providing an international electronic forum for dialogue on research methodology and values; to WP4 by making new research results immediately available to present and future Ph.D. students; to WP5 by way of making it possible for different kinds of users to keep up to date on what goes on in their field of interest; and to WP.6 by way of allowing institutes and individual researchers to make their research papers easily available to an international audience and by way allowing for comments on individual papers within the archive.

WP6: International research co-operation		Remarks
Task 16: International research communication		
Task 17: International evaluation of DARCOF II projects		
Task 18: The EU research system and international co-operation		
<i>Deliverable</i>		
D32	Construction and develop the international internet site of DARCOF	✓ DARCOF's own sites have been supplemented with the international Organic Eprints archive
D33	Regularly update the international internet site of DARCOF	August 2002 and onwards
D34	Publish an international newsletter (first no. June 2002, 4 times yearly)	First no. February. 2003 4 issues annually
D35	Publish biannually DARCOF reports (July 2003, July 2005)	December 2003
D36	Coordinate midterm international evaluation of DARCOF II projects (Nov. 2002)	✓
D37	Make agreements of co-operation with EU partners and research institutes	Co-operation through expression of interest June 2002
D38	Participate in or co-ordinate future EU proposals (at least one per year)	Participation in 3 concerted actions in FWP 5. 4 projects in FWP 6
D39	Contribute in EU conferences on organic farming	September 2002, November 2002
D40	Arrange international conferences and workshops	April 2003
<i>Milestones</i>		
M13	International research societies has acknowledged the international internet site and newsletter (at least 500 subscriptions of the newsletter)	350 subscribers in November 2003
M14	Alle Danish research projects have been evaluated and acknowledged by an international scientific panel (Feb. 2003)	✓ The Organic Eprints archive was a valuable tool in the evaluation
M15	DARCOF has obtained expert status and has made network contact to relevant persons in the EU System (at latest Jan 2004)	July 2002

E. Project publications and other products

1. Articles in international, scientific journals with review procedures

**Alrøe, H.F. and Kristensen, E.S. (2001). Towards a systemic ethic: In search of an ethical basis for sustainability and precaution. Forthcoming in *Environmental Ethics*. 25(1):59-78.

**Alrøe, H.F. and Kristensen, E.S. (2002) Towards a systemic research methodology in agriculture: Rethinking the role of values in science. *Agriculture and Human Values* 19(1): 3-23.

Chapter 2 in Vaarst, M. et al. (eds.) *Animal health and welfare in organic Agriculture. From fraction to holistic action.*

Kristensen, E. Steen & Thamsborg, S.M. 2002. Future European market for organic products from ruminants. EAAP publication no. 106: 5-15.

Noe, E. and Alrøe, H.F. (2004) Combining Luhmann and Actor-NetworkTheory to see Farm Enterprises as Self-organizing Systems. *Cybernetics and Human Knowing*.

Tybirk, K., Frederiksen, P. & Alrøe, H.F. (Submitted 2002). Nature Quality in organic farming. *Agriculture, Ecosystems and Environment*.

Verhoog, H., Lund, V. Alrøe, H.F. & Vaarst, M. (2002) Animal welfare, ethics and organic farming, in Vaarst, Mette; Lund, Vonne; Roderick, Steve; Lockerets, William, Eds. *Animal health and welfare in organic agriculture. From fraction to holistic action.*

2. Presentations at congresses, symposiums etc.

Alrøe, H.F. (2001) Forsigtighedsprincippet – etiske aspekter og håndfaste konsekvenser. In: *Ekologisk lantbruk, Ultuna 13 - 15 november 2001. Sammenfatninger av foredrag och postrar*, pp. 237-41. Centrum for uthålligt lantbruk, Sverige.

Alrøe, H.F. (2001) Konsekvenser af økologisk omlægning – fødevareforsyning og fødevarerikkerhed. In: *Ekologisk lantbruk, Ultuna 13 - 15 november 2001. Sammenfatninger av foredrag och postrar*, pp. 102-106. Centrum for uthålligt lantbruk, Sverige.

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Alrøe, H.F. and Kristensen, E.S. (2002) Science as an actor. On the role of values and science in organic farming. In: Powell et al. (eds), *UK Organic Research 2002: Proceedings of the COR Conference, 26-28th March 2002, Aberystwyth*, pp. 97-100.

Alrøe, H.F. and Kristensen, E.S. (2001) Values in organic farming and their implications. Paper presented at EurSafe 2001 - Third Congress of the European Society for Agricultural and Food Ethics, Florence, Italy, 3. – 5. October 2001, Preprints pp. 115-16.

Alrøe, H.F. and Kristensen, E.S. 2001 Values in organic farming and their implications. Presentation at the workshop Organic farming, system thinking and the future, Waageningen International Conference Centre, 21. - 23. February 2001. (Abstract, 2 pp.) [Workshop webpage at <http://www.iac.wageningen-ur.nl/workshops/organicfarm.htm> with draft reader]

Alrøe, Hugo Fjelsted and Kristensen, Erik Steen and Hansen, Birgitte (2002) Identifying the basic normative principles for organic farming. In *Proceedings 14th IFOAM Organic World Congress, Victoria, Canada, Cultivating Communities*, pages 281.

Hansen, B., Alrøe, H.F., Kristensen, E.S. & Wier, M. Assessment of food safety in organic farming. Working paper no. 52, DARCOF.

Hansen, B. & Kristensen, E. Steen 2001. Grundvandsbeskyttelse ved økologisk jordbrug. I: *Virkemidler i grundvandsbeskyttelsen. ATV, Jord og Grundvand*. 61-70.

Kristensen, E.S. 2001. Organic farming and food safety. Paper presented at FUNDISA Interna-

tional Symposium of Food Safety. October 25-26 2001, Madrid.

- Kristensen, E.S. 2001. Future European market for organic products from ruminants. Paper presented at the scientific conference on "Organic Meat and Milk from Ruminants". October 4-6 2001. Athens, Greece.
- Kristensen, E.S. 2002. Research Co-operation in organic agriculture. Paper presented at workshop at Wageningen Agricultural University, April 4th 2002.
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- Noe, E. & Alrøe, H.F. (2002) Farm enterprises as self-organizing systems: A new framework for studying farm enterprises? Paper presented to RC40, Sociology of agriculture and food, on the XVth ISA World Congress of Sociology, 7 – 13th July, 2002, Brisbane, Australia.

3. Articles in agricultural journals etc.

- Alrøe, H.F. (2001) Miljøvurdering er mere end fakta. Kronik i Information, 20. december 2001, p. 8.
- Alrøe, H.F. (2001) Helhedsorienteret forskning i økologi. Global Økologi, 8(4): 9-13.
- Anonymous. 2001. Principper for økologisk jordbrug – Fødevarer sikkerhed i økologisk jordbrug. Notat udarbejdet til Det Økologiske Fødevareråd. Forskningscenter for Økologisk Jordbrug, Foulum. 20 pp.
- Anonymous. 2001. Toårsrapport fra Forskningscenter for Økologisk Jordbrug. Forskningscenter for Økologisk Jordbrug, Foulum.
- Anonymous. 2001. Principles of Organic Farming. Discussion document prepared for the DARCOF Users Committee. Danish Research Centre for Organic Farming, Foulum. 36 pp.
- Anonymous. 2001. Biennial Report from Danish Research Centre for Organic Farming, Foulum. 92 pp.
- Fredshavn, J., Tybirk, K. og Alrøe, H.F. (2001) Baggrund og formål med rapporten. In: *Naturkvalitet i økologisk jordbrug*, FØJO rapport nr. 9: 11-16. Forskningscenter for Økologisk Jordbrug, Foulum.
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- Hermansen, J.E. (Red.) 2000. Økologisk svineproduktion - udfordringer, muligheder og begrænsninger FØJO-rapport nr. 8. Forskningscenter for Økologisk Jordbrug, Foulum.
- Jensen, K.O., Larsen, H.N., Mølgaard, J.P., Andersen, J.O. Tingstad, A., Marckmann, P. & Astrup, A. 2001. Økologiske fødevarer og menneskets sundhed. FØJO-rapport nr. 14. Forskningscenter for Økologisk Jordbrug, Foulum.
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See WP5 and 6 for further information.

8. Budget

A. Account for any change in budgets

Comments:

More than half of the budget is reallocated to different projects/institutions in DARCOF. This course some uncertainty in the budget. Compared to last years budget 750.000 DKK is asked to be moved from 2003 to coming years. This is mainly because of delays in knowledge synthesis (WP2).

B. Budget for the whole project (1.000 DKK)

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

	Consumption before 2003	Expected consumption 2003	2004	2005	Total
WP1	587	400	513	400	1.900
WP2	3.050	800	1.450	0	5.300
WP3	350	250	300	0	900
WP4	1.950	2.650	2.200	970	7.770
WP5	750	550	550	550	2.400
WP6	300	600	600	500	2.000
Total	6.987	5.250	5.613	2.420	20.270

Comments:

9. Signatures and stamps

Name	Institute	Date	Signature
Head of project Erik Steen Kristensen	Forskningscenter for Økologisk Jordbrug	27.11.03	