

International Conference



# Programme

**Organic farming systems as a driver for change**

**21–23 August 2013 Denmark. NJF seminar 461.**



Organized in collaboration with ICROFS – International Centre for Research in Organic Food Systems and EPOK – Centre for Organic Food and Farming at the Swedish University of Agricultural Sciences.

**njff**  
Nordic Association of Agricultural Scientists

[www.njf.nu](http://www.njf.nu)

## Organic farming systems as a driver for change

Organic agriculture has grown to a sector with profound impact on the societal and agricultural development. This conference aims to reveal how organic research has contributed, or may contribute to change the many and serious challenges that we face to protect our environment and to ensure a satisfactory living for all.

### Target groups

All researchers, advisors, teachers and other stakeholders with an interest in organic food and farming systems are welcome.

### Four tracks

The program comprises four tracks, where well qualified track experts will follow the track during the whole conference. These experts will contribute to and lead sessions (together with session chairs). Their task is to make sure that discussions are focused on the overruling question: How can our research efforts contribute to a required change? The track experts will also give an introductory key-note speech and in the final plenary session, they will contribute to sum up major messages from the presentations and discussions during the conference.

**Dr. Susanne Padel** will be the track expert of track 1, **Societal and economic viability**. Susanne is principal researcher and team leader for socioeconomics and policy at The Organic Research Centre (ORC), Elm Farm in the UK. The socio economic work of ORC covers standards and certification systems, consumer attitudes to organic product and market development, policy support payments, profitability as well as public benefits of organic farming.



**Dr. Tommy Dalgaard** will be the track expert of track 2, **Transition to renewable resources**. Tommy works at Aarhus University, Department of Agroecology in Denmark on the development of sustainable farming systems, with an emphasis on the reduction of non-renewable resource use in organic farming. His work includes methodologies for the assessment of energy and nutrient balances, potentials for bioenergy production, reductions in greenhouse gas emissions, and multi-criteria assessment of scenarios for the development of a more sustainable bioeconomy.



**Dr. Christine Watson** will be the track expert of track 3, **Nutrient sufficiency and management in farming systems**. Christine leads the Soils Research Team at Scotland's Rural College (SRUC) in the UK. Her research focuses on improving nutrient use efficiency in a wide range of agricultural systems including outdoor pig production, dairying, organic farming and agroforestry. She is particularly interested in the management of legumes in agricultural systems. Most of her research focuses on nitrogen and phosphorus although she has recently begun working on trace elements in farming systems.



**Dr. Paolo Barberi** will be the track expert of track 4, **Productivity and sustainable production levels in animal and crop production**. Paolo is Professor in Agronomy and Field Crops at Sant'Anna School of Advanced Studies in Italy, where he leads an Agroecology team and coordinates a Curriculum (Functional Biodiversity in Agroecosystems) in the International Doctoral Programme in Agrobiodiversity. His research focuses on 1) the optimisation of low-input and organic cropping systems through increased diversity, 2) functional biodiversity in agroecosystems, and 3) weed ecology and management.



## 21 AUGUST

10:00–12:00	REGISTRATION			
12:00–13:00	LUNCH			
13:00–14:45	<b>CONFERENCE OPENING AND INTRODUCTORY PLENARY SESSION</b>			
	<i>Welcome and instructions</i> , Anne-Kristin Løes, Chairman of scientific committee			
	<b>Opening speech:</b> <b>Organic farming meets future food and environmental challenges</b> , <i>Elisabeth Gauffin</i> , dairy farmer and the president of KRAV - Swedish Association for Standards in Organic Agriculture and Food, Sweden			
	<b>Track 1: Societal and economic viability</b> <b>The organic sector as an innovation system</b> , <i>Susanne Padel</i> , The Organic Research Centre, Elm Farm, UK			
<b>Track 2: Transition to renewable resources</b> <b>Energy balance comparisons of organic and conventional farming systems and potentials for mitigation of fossil resource use</b> , <i>Tommy Dalgaard</i> , Department of Agroecology, Aarhus University, Denmark				
14:45–15:15	COFFEE			
15:15–16:15	<b>PLENARY SESSION CONTINUED</b>			
	<b>Track 3: Nutrient sufficiency and management in farming systems</b> <b>Long-term management of nutrients in organic farming – principles and practice</b> , <i>Christine Watson and Elizabeth Stockdale</i> , Scotland's Rural College, UK			
<b>Track 4: Productivity and sustainable production levels in animal and crop production</b> <b>Is agroecology the most sustainable approach for all organic farming systems?</b> <i>Paolo Bàrberi</i> , Institute of Life Sciences, Sant'Anna School of Advanced Studies, Italy				
16:15–16:30	BREAK			
16:30–17:45	<b>ORAL PRESENTATION SESSION WITHIN TRACKS</b>			
	<b>Track 1: Organic farming as a driver for the livelihood of small scale farmers?</b>	<b>Track 2: Organic production systems mitigating climate change</b>	<b>Track 3: How can organic farming systems diminish the risk of nitrogen leaching?</b>	<b>Track 4: Challenges in clover production – is the nitrogen well running dry?</b>
	<b>Co-operative or co-oyote? Producers' choice between intermediary purchasers and Fair-trade and organic co-operatives in Chiapas</b> , <i>A.B. Milford</i> , Norway	<b>How can organic agriculture contribute to long-term climate goals?</b> <i>C. Sundberg, E. Rööös, E. Salomon &amp; M. Wivstad</i> , Sweden	<b>Agronomical and environmental performances of organic farming in the Seine watershed</b> , <i>J. Anglade, G. Billen &amp; J. Garnier</i> , France	<b>Clover fatigue – a reason for precaution in organic farming?</b> <i>G.L. Serikstad, A. de Boer, &amp; C. Magnusson</i> , Norway
	<b>Conversion to organic farming; experiences from Punjab and Uttarakhand</b> , <i>A.M. Nicolaysen</i> , Norway	<b>Multispecies grasslands for crop productivity and carbon storage</b> , <i>J. Eriksen, T. Mortensen &amp; K Søegaard</i> , Denmark	<b>Nitrogen leaching from organic and conventional crop rotations (France)</b> , <i>M. Benoit, J. Garnier, G. Billen, B. Mercier &amp; A. Azougui</i> , France	<b>Plant parasitic nematodes – problems related to clover and organic farming</b> , <i>C. Magnusson &amp; R. Holgado</i> , Norway
<b>Productivity and growth in organic value chains in East Africa – potentials and challenges for accessing local high value markets</b> , <i>L. Andreasen</i> , Denmark	<b>Nitrogen mineralization and greenhouse gas emissions after soil incorporation of ensiled and composted grass-clover as green manure</b> , <i>M.S. Carter, P. Sørensen, S.O. Petersen &amp; P. Ambus</i> , Denmark	<b>Management affects nitrate leaching from organic farms</b> , <i>M. Askegaard &amp; J. Eriksen</i> , Denmark	<b>Opportunities and limitations in use of clovers as nitrogen source in organic farming systems in Norway</b> , <i>I. Sturite</i> , Norway	

## 21 AUGUST (CONTINUING)

17:45–18:45

### POSTER WORKSHOPS WITHIN TRACKS

#### **Track 3: Innovative strategies for sustainable plant nutrition**

**Optimizing nitrogen utilization by Ecological Recycling Agriculture (ERA),**  
*P. Seuri, Finland*

**Contaminants in manure – a problem for organic farming?**  
*K. McKinnon, G.L. Serikstad & T. Eggen, Norway*

**Ashes for organic farming,**  
*T. Kousa, M. Heinonen, T. Suoniitty & K. Peltonen, Finland*

**The impact of conversion to ecological recycling agriculture (ERA) on farm nutrient budgets and production levels,**  
*J. Kivela & K. Westerling, Finland*

**In crop rotation green manures as winter cover crops enhance ecosystem services of farming,**  
*L. Talgre, B. Tein, V. Eremeev, D. Matt, E. Reintam, D. Sanches de Cima, A. Luik, Estonia*

#### **Track 4: Improving the protein supply of animals**

**Profitability of organic and conventional dairy production with different dietary proportions of high quality grass silage,**  
*M. Patel, E. Wredle, E. Spörndly, J. Bertilsson & K.-I. Kumm, Sweden*

**Forage legume silage and cold-pressed rapeseed cake for dairy bull calves,**  
*B. Johansson & A. Hessle, Sweden*

**Feeding value of red clover/ grass, Persian clover and common vetch for pigs,**  
*K. Partanen, J. Valaja & H. Siljander-Rasi, Finland*

**Inclusion of mussel meal in diets to growing/finishing pigs,**  
*K. Andersson, M. Neil, N. Lundeheim & A. Wallenbeck, Sweden*

**Feed intake and weight and body condition changes of 100% organically fed lactating sows,**  
*L. Voutilainen, K. Partanen & H. Siljander-Rasi, Finland*

#### **Track 4: Perennial weed control – emperor's new clothes?**

**Control of perennial weeds based on weed biology and environmental considerations,**  
*M. Thomsen, LO Brandsæter, K. Mangerud & H. Riley, Norway*

**Resource effective control of *Elytrigia repens*,**  
*B. Ringselle, L. Andersson, G. Bergkvist & H. Aronsson, Sweden*

**Temperature effect on fructan storage and regeneration of Canada thistle (*Cirsium arvense* (L.) Scop),**  
*L. Nkurunziza & J.C. Streibig, Sweden*

**Improved weed management in organic crop production**  
*B. Melander & J.E. Olesen, Denmark*

19:00–21.30

### WELCOME RECEPTION



## 22 AUGUST

08:30–10:05

### ORAL PRESENTATION SESSION WITHIN TRACKS

**Track 1: Organic consumption and standards as drivers for change**

**Organic food prices and the consumer – a review of the evidence,**

*J. Aschemann-Witzel & S. Zielke, Denmark*

**How can a private standard accelerate the development of organic production?**

*E. Gauffin, L. Hällbom & K. Sjö Dahl Svensson, Sweden*

**Transition to Organic Food in Danish Public Procurement: Can a top-down approach capture the practice?**

*N.H. Kristensen & M.W. Hansen, Denmark*

**Track 2: Fossil fuel free farming – is it possible?**

**Organic farming without fossil fuels – life cycle assessment of two Swedish cases,**

*C. Sundberg, M. Kimming, Å. Nordberg, A. Baky & P-A. Hansson, Sweden*

**Embedded energy in dairy stables,**

*M. Koesling, S. Hansen & G. Fystro, Norway*

**Self-sufficiency of fuels for tractive power in small-scale organic agriculture,**

*S. Johansson & K. Belfrage, Sweden*

**Track 3: Innovative strategies for sustainable plant nutrition**

**Long-term changes in soil nutrients and grass/clover yields on Tingvoll farm,**

*M. Ebbesvik & A.K. Løes, Norway*

**Estimating nitrogen supply and cereal crop yield in organic crop production,**

*J.E. Olesen & P. Sørensen, Denmark*

**Development of phosphatase and dehydrogenase activities in soils of annual cropland and permanent grassland in an organic farm,**

*M. Ohm, H.M. Paulsen, B. Eichler-Löbermann & G. Rahmann, Germany*

**Effects of applying anaerobically digested slurry on soil available organic carbon and microbiota,**

*A. Johansen, R. Pommeresche, H. Riley & A-K. Løes, Denmark*

**Track 4: Strategies for profitable dairy farming – inspiration for conventional farmers?**

**Comparison of organic and conventional dairy farm economic and environmental performances throughout North West Europe,**

*A. Grignard, D. Stilmant, J. Oenema, S. Tirard, L. Debryene, S. Hennart, J. Boonen & partners of DAIRYMAN project, Belgium*

**Operational strategies for optimizing grazing when using automatic milking systems in organic dairy production,**

*F.W. Oudshoorn & E. Spörndly, Denmark*

**Long term farm study of organic milk production – moderate concentrate inputs and high milk yields on Tingvoll farm,**

*T. Strøm & M. Ebbesvik, Norway*

**Feeding toasted field beans to dairy cows**

*K.F. Jørgensen, A.M. Kjeldsen & M. Askegaard, Denmark*

10:05–10:30

### COFFEE



## 22 AUGUST (CONTINUING)

<p><b>10:30–11:45</b></p>	<p><b>POSTER WORKSHOPS WITHIN TRACKS</b></p>		
	<p><b>Track 1: Research as a driver for change</b></p>	<p><b>Track 2: Multifunctional use of farm resources – improved use of biogas digestate</b></p>	<p><b>Track 4: Developing cropping systems for a sustainable future</b></p>
	<p><b>Importance of organic farming research in Sweden for innovations and increased sustainability in agriculture,</b> <i>M. Wivstad, P. Fredriksson, S. Gunnarsson, R. Hoffman, B. Johansson, A. Mie, U. Nilsson, E. Rööf, E. Salomon, C. Sundberg, K. Ullvén &amp; A. Wallenbeck, Sweden</i></p> <p><b>The new tendencies in the scientific research of the organic food system in Finland,</b> <i>J. Nuutila, Finland</i></p> <p><b>Organic production and consumption in Norway – new knowledge through research and dissemination,</b> <i>G. L. Serikstad, A.-K. Løes, E. Brunberg, L. Grøva, H. Steinshamn &amp; K. Sørheim, Norway</i></p> <p><b>Acquisition and transfer of knowledge within the organic sector in Iceland,</b> <i>Ó.R. Dýrmundsson, Iceland</i></p> <p><b>Organic farming research in Estonia,</b> <i>S. Pehme, E. Peetsmann, D. Matt, A. Luik &amp; E. Veromann, Estonia</i></p> <p><b>Fifteen years of research in organic food systems in Denmark – effects on the sector and society,</b> <i>I. Ankjær Rasmussen &amp; N. Halberg, Danmark</i></p>	<p><b>Strategic management of nitrogen within an organic cropping system by using digestate from biogas production of recirculated crop residues,</b> <i>T. Råberg, E. Kreuger, L. Björnsson &amp; E. S. Jensen, Sweden</i></p> <p><b>Biogas nutrient management in organic cropping – not only a nitrogen issue,</b> <i>A. Gunnarsson &amp; H. Asp, Sweden</i></p> <p><b>Post-harvest sown catch crops – results from two years of organic field trials,</b> <i>K. H. Madsen, I. Bertelsen &amp; M. Askegaard, Denmark</i></p> <p><b>Management of forb species mixtures for high biomass production,</b> <i>T. Mortensen, J. Eriksen &amp; K. Søgaard, Denmark</i></p> <p><b>Anaerobic digestion of manure – consequences for plant production,</b> <i>A.-K. Løes, A. Johansen, R. Pommeresche &amp; H. Riley, Norway</i></p>	<p><b>Goal conflicts in long-term cropping system trials – the example of carrots,</b> <i>P. Modig, C. Gissén, A. Gunnarsson &amp; M-L Albertsson Juhlin, Sweden</i></p> <p><b>Organic rapeseed production in Finland,</b> <i>K. Hakala, Finland</i></p> <p><b>Translocation of imidacloprid from coated rape (<i>Brassica nap</i>) seeds to nectar and pollen,</b> <i>T. Eggen, S.R. Odenmarck &amp; A.-K. Løes, Norway</i></p> <p><b>Organic production systems in Northern highbush blueberries,</b> <i>S. Caspersen, B. Svensson, S. Khalil &amp; H. Asp, Sweden</i></p> <p><b>COBRA: a new European research project for organic plant breeding,</b> <i>T.M. Pedersen, T.F. Döring, P. Baresel, A. Borgen, M.R. Finckh, S.A. Howlett, L. Ortolani, B.D. Pearce &amp; M.S. Wolfe, Denmark</i></p> <p><b>Quantitative population epigenetics a catalyst for sustainable agriculture,</b> <i>R. Stauss, Germany</i></p> <p><b>Quantitative population epigenetics in screening and development of regulator-active factors of the farming system,</b> <i>R. Stauss, Germany</i></p>
<p><b>12.00–18:00</b></p>	<p><b>EXCURSIONS INCLUDING LUNCH AND COFFEE</b></p>		
	<p><b>Excursion 1: Challenges in organic crop production. Visit to two very different organic crop producers.</b></p>	<p><b>Excursion 2: Livestock production and animal welfare: A tour to two organic livestock farms; an egg producer and a dairy farm.</b></p>	<p><b>Excursion 3: Focus on climate, resources and food systems. Visit to two organic farms that focus on on-farm greenhouse gas reduction.</b></p>
<p><b>19:00–22:00</b></p>	<p><b>CONFERENCE DINNER</b></p>		

## 23 AUGUST

08:30–10:05

### ORAL PRESENTATION SESSION WITHIN TRACKS

**Track 1: Supporting development of robust and holistic farming systems**

**Impact of the dynamics of discourses on the development of organic farming in Flanders,**

*L. De Cock, J. Dessein & M.P.M.M de Krom, Belgium*

**Barriers for developing more robust organic arable farming systems in practice,**

*E. Noe, P. Sørensen, B. Melander, J.E. Olesen and Erik Fog, Denmark*

**Picture card tool for holistic planning in organic plant production,**

*E. Fog, J.E. Olesen, E. Noe, P. Sørensen & B. Melander, Denmark*

**Introducing trees in Dutch dairy and poultry farms,**

*M. Bestman & N. van Eekeren, The Netherlands*

**Track 3: Shaping resource efficient management strategies for green manure crops**

**Utilization of nitrogen in legume-based mobile green manures stored as compost or silage,**

*P. Sørensen, E. Kristensen, K. Odokonyero & S. O. Petersen, Denmark*

**The impact of nitrogen in red clover and lucerne swards on the subsequent spring wheat,**

*Ž. Kadžiulienė, L. Šarunaite & L. Kadžiulis, Lithuania*

**Effect of green manure management on barley yields and nitrogen recovery,**

*S. Hansen, R.B. Frøseth, A.K. Bakken, H. Riley, K. Thorup-Kristensen & M.A. Bleken, Norway*

**Effects of organic versus conventional farming on different chemical soil parameters in Estonia,**

*D. Sánchez de Cima, E. Reintam & A. Luik, Estonia*

**Track 4: Changes towards improved productivity and animal welfare**

**Robust breeds for organic pig production,**

*T. Serup, Denmark*

**Associations between pig leg health and lean meat growth in commercial organic herds,**

*A. Wallenbeck, C. Eliasson & M. Alarik, Sweden*

**Low stress and safe handling of outdoor cattle – effective measures to improve work environment and avoid dangerous situations,**

*Q. Geng, S. Atkinson & E. Salomon, Sweden*

**Could a different management routine that strengthens the mother-offspring bond contribute to a more efficient organic piglet production?**

*O. Thomsson, A-S. Bergqvist, L. Eliasson-Selling, Y. Sjunnesson & U. Magnusson, Sweden*

**Track 4: New methods and designs for organic vegetable production**

**The effect of different compost applications in organic production of lettuce (*Lactuca sativa* L.),**

*A. Kir, M. Tepecik & O. Abaci, Turkey*

**The effect of companion planting on the abundance of pest complex and its parasitism rate on white cabbage,**

*R. Kaasik, G. Kovács, S. Pehme & E. Veromann, Estonia*

**The introduction of the new control method of plant viruses infection for organic farming,**

*S.B. Kwon & J.S. Jung, Korea*

**The influence of organic and conventional production on yield and quality of carrots,**

*I. Bender & A. Ingver, Estonia*

10:05–11:00

### COFFEE AND POSTERS

11:00–12:30

### FINAL PLENARY SESSION FOR SUMMING UP CHALLENGES, CONCLUSIONS AND FUTURE RESEARCH

*Susanne Padel, Tommy Dalgaard, Christine Watson & Paolo Bàrberi. Discussion moderated by Niels Halberg, Director of ICROFS – International Centre for Research in Organic Food Systems.*

12:30–13:30

### LUNCH

## Venue

The conference will take place at Vingsted Hotel & Conference Centre Vingsted Skovvej 2, 7182 Bredsten, Denmark. The conference centre is located in the village of Bredsten, 12 km from Vejle and 20 km from Billund.

- Flights to Copenhagen or Billund airport.
- Trains from Copenhagen to Vejle (2,5 h).
- Bus no 43 from Vejle or Billund to Bredsten.

Further info at [www.vingsted.dk](http://www.vingsted.dk)

## Participation fee

NJF members before 2013-06-15: 3500 SEK

NJF members after 2013-06-15: 4200 SEK

Others before 2013-06-15: 4375 SEK

Others after 2013-06-15: 5300 SEK

Students before 2013-06-15: 3000 SEK

Students after 2013-06-15: 3600 SEK

## Registration

Register at [www.njf.nu](http://www.njf.nu)

## Additional posters

The deadline for submitting posters within the programme has passed. But it is still possible to bring a poster that will not be included in the programme and not published in the conference proceedings. Such poster should be announced at latest 1 August by e-mail with the poster title to [kirsi.partanen@snellman.fi](mailto:kirsi.partanen@snellman.fi). Commercial posters are not accepted.

Further instructions for posters are available at [www.njf.nu](http://www.njf.nu)



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