

Swedish Research on

# Organic Food and Farming 2008–2018

Updated version – November 2018



**EPOK – Centre for Organic Food & Farming** at The Swedish University of Agricultural Sciences (SLU) works with communication and knowledge transfer as well as with collaboration of research and education on organic agriculture in a Swedish, Nordic and international perspective. EPOK coordinates and initiates research covering a wide range of research topics with relevance for organic farming.



### A Swedish Research Agenda for Organic Agriculture 2013

A Swedish research agenda for organic agriculture was developed by EPOK in an open process together with stakeholders in the food chain, as well as in dialogue with researchers and research funding bodies. The main aim of the research agenda is to provide a firmly established document to facilitate research priorities. Another important aim is to guide and inspire researchers to address relevant problems and draw attention to areas where knowledge is lacking. The research agenda is operating from 2013 and can be downloaded from [www.slu.se/epok](http://www.slu.se/epok)



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# Introduction

Swedish research on organic farming is to a large extent funded by directed calls for research on organic food systems. These funders are the research council Formas, SLU EkoForsk at the Swedish University of Agricultural Sciences, the Swedish Board of Agriculture and the Ekhaga foundation. Furthermore, the Swedish Farmers' Foundation for Agricultural Research (SLF) is funding research on organic farming within their ordinary research programmes, and the projects addressing organic farming are reported here. In 2013 a special program for research on organic farming was launched, which was a joint call of SLF and Formas for the period 2014–2016. This research programme was also jointly financed by the two partners. Swedish research on organic farming is also funded by international funding bodies, e.g. the EU framework programs. Furthermore, several ERA-Net programs, mainly funded by national partners, are relevant for organic agricultural research. In this report only projects within the ERA-Net CORE Organic are included.

In this publication the funded research projects since 2008 are listed. From SLU EkoForsk and Formas the 3 to 4-year calls since 2008 are listed. From the Swedish Board of Agriculture, SLF and the Ekhaga foundation, which have yearly research calls, the projects are structured in different subjects and listed chronologically with the most recent projects first.

The research activities cover a wide range of topics within organic crop and animal production as well as about food quality and marketing of organic products. Animal health and welfare issues in organic pig, poultry, dairy and meat production systems are high research priorities. Another important task is to optimise production and improve cultivation stability of protein feed crops, and also to find new local or regional feed protein sources. Locally

produced protein feed for monogastric animals has been of special importance. The potential for effective production based on high quality forage and grazing is one central research topic in dairy production. Research on crop and animal breeding has become of increased interest to meet the need of specific traits and breeding goals in organic farming systems, as an important part of building robust farming systems.

Effective weed control, both direct weed regulation and preventive measures, not the least of perennial weed species is another research focus in both agricultural and horticultural cropping systems. Pest and disease control with biological and preventive methods is a strong research area. The potential for conservation biological control to decrease pests and diseases is of high interest together with related research on effects of organic farming on biological diversity and ecosystem services on landscape level. A number of research projects are conducted on how to achieve high nutrient use efficiency of organic fertilisers, manure as well as a range of rest-products from society. Timing of fertiliser nutrient release in relation to crop nutrient needs to avoid environmental harmful emissions is a challenge. The research on horticultural crops has included both field-grown vegetables, barriers and fruits and green house grown crops. Crop protection strategies has been a strong focus including weed management in field crops.

Most of the research is conducted to meet knowledge needs in agricultural primary production, but some projects deal with other parts of the food system e.g. analysing organic markets and how to secure organic values throughout the food chain. Also, some projects on food quality (mainly Ekhagastiftelsen) and mild food processing (mainly CORE Organic) has been conducted.

# Funders



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

The Swedish University of Agricultural Sciences (SLU) coordinates a programme for research projects within organic agriculture and horticulture called SLU EkoForsk.

The aim is to improve the knowledge base for the development of crop production, animal husbandry and the production of fruit, berries and vegetables. Projects should contribute to the development of a sustainable production in terms of environmental concerns, animal welfare, resource management, income level and productivity.

EkoForsk funded 57 projects from 2008–2019. ([www.slu.se/ekoforsk](http://www.slu.se/ekoforsk))



The Formas programme for organic agriculture research may cover different parts of the food chain from primary production in agriculture and horticulture to the processing and marketing of organic food. Research of an interdisciplinary nature is encouraged. The research Formas finances should be of high relevance for current organic production and food systems.

Formas funded 38 projects from 2008–2018. Another 6 projects were funded 2014–2016 (listed under SLF). (<http://proj.formas.se>)



**Stiftelsen  
Lantbruksforskning**

The Swedish Farmers' Foundation for Agricultural Research (SLF) is normally funding research on organic farming within their ordinary research programs. However, in 2013 a special program for research on organic farming was launched, which was a joint call of SLF and Formas for the period 2014–2016. SLF funded 36 projects during 2008–2018. Furthermore 9 projects were funded by SLF in a joint SLF/Formas program 2014–2016.

All SLF and Formas funded projects (9 + 6) in this call are listed under SLF. (<http://www.lantbruksforskning.se>)



**Jordbruks  
verket**  
Swedish Board  
of Agriculture

The Swedish Board of Agriculture funds research and development projects aiming at strengthen applied knowledge in animal health, animal husbandry, horticulture and crop management within organic agriculture.

The Swedish Board of Agriculture funded 69 projects during the period 2008–2018, of which some started before 2008. (<http://www.jordbruksverket.se>)

## EKHAGASTIFTELSEN

The Ekhaga foundation was founded 1944 and supports research in organic farming and complementary and biological medicine. Only projects on organic agriculture and projects conducted in Sweden are reported here.

The Ekhaga foundation funded 38 projects during the period 2008–2018.

<http://www.ekhagastiftelsen.se>



CORE Organic is a European transnational research cooperation project, which is part of the ERA-Net Scheme supported by the European Commission ([www.coreorganic.org](http://www.coreorganic.org)). CORE Organic has been run for three-to four-year periods and is coordinated by The International Centre for Research in Organic Food Systems (ICROFS). Four programs, 2008–2020 are included in this report.

The research council Formas is the Swedish partner in CORE Organic. The aim of CORE Organic is to enhance the quality, relevance and utilisation of resources in European research in organic food and farming through coordination and collaboration. Learn more from the web site: [www.coreorganic.org](http://www.coreorganic.org).

A number of projects have been funded by the CORE Organic programs, with Swedish partners in three (CO I), six (CO II) and eight projects (CO Plus), which are reported in this brochure. For the last program, CO Cofund running 2018–2020, all 12 funded projects are included, of which seven have partners in Sweden.

# Mapping organic research in Sweden during the last decade

In late 2017 EPOK carried out a research review by request from and funded by the Swedish Board of Agriculture. The review included Swedish research on organic production and organic food from 2008 and was based on the projects in this report. A small number of projects started in 2018 are however not included in the tables 1 & 2 (*Forskning om ekologiskt lantbruk, rapport EPOK 2018, www.slu.se/ekoforskning2018*)

The review consists of 268 projects in total carried out from 2008 to 2017. As mentioned in the introduction, the projects are mainly from the research programmes focused on organic production, both in this report and in the charts below. Table 1 presents the organic research funding from the different funders in Sweden.

Formas has been the major funder during the period. SLU Ekoforsk has also been a stable funder with calls every three years since 2002 for applied research.

Formas funding has been quite consistent during the period. 2014 stands out because of a gap between the calls 2011–2013 and 2015–2018 (2018 is not included in the tables). Formas did assign 12 million SEK in 2014 but divided the money during three years in collaboration with SLF (see table 1). The latest national call 2015–2018 also included 12 million SEK per year, which added up to a total of 16 million SEK for the years in collaboration with SLF. Formas funding of the European transnational research cooperation project CORE Organic has grown for each programme period. We only have access to the total amount of funding for each CORE Organic programme, so the annual amount presented is the total funding equally divided for each year. The decision on increased funding of the CORE Organic programmes was partly based on the recommendations in an evaluation of the organic research carried out by Formas (Formas 2006. Evaluation of Research on Organic Production in Sweden. Evaluation report, Stockholm).

*Table 1. Organic research funding in Sweden 2008 – 2017 by funder and year. Source: funder decision protocols, project databases and websites.*

Funder and number of projects		Million SEK										Total
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Formas	45	16.4	16.4	16.4	15.9	15.9	15.9	4.0 <sup>1</sup>	16.0 <sup>1</sup>	16.0 <sup>1</sup>	12.0	145
Formas-CORE Organic	17	2.0	2.0	2.0	5.0	5.0	5.0	-	6.0 <sup>2</sup>	6.0 <sup>2</sup>	6.0 <sup>2</sup>	39
SLU Ekoforsk	60	7.8	7.8	7.8	7.0	7.0	7.0	6.5	6.5	6.5	6.9	71
Swedish Board of Agriculture	68	12.8	10.9	8.2	4.0	4.4	3.7	5.0	1.5	1.4	0.8	53
Swedish Farmers' Foundation for Agricultural Research (SLF)	40	0.1	3.1	6.8	9.0	6.2	5.5	7.3	7.6	6.6	2.1	54
Ekhaga foundation	38	2.4	2.4	2.4	3.0	1.2	0.7	2.3	4.1	3.4	3.5	25
Total number of projects	268											
Sum per year		41	43	44	44	40	38	25	42	40	31	387

<sup>1</sup> 4 million SEK per year from 2014 to 2016 was part of the Formas-financed call in collaboration with SLF. Formas own national call included 12 million SEK per year from 2015 to 2017.

<sup>2</sup> 0.5 million SEK from the EU.

The Swedish Board of Agriculture has been an important funder of applied research in the beginning of the period but there has been a major reduction during the last years. SLF's funding has also been inconsistent during the years, mainly because of not having calls focused on organic research.

## Great variation of research areas

The 268 projects were divided in different subject matters and the results show a dominance of projects within crop production followed by animal husbandry and horticulture (Table 2). The compilation also shows some differences between the funders. Formas has the largest variation of subjects and the focus on biodiversity and studies of ecosystem services linked to organic production systems are comprehensive. The European programme CORE organic has a deviant distribution between different subject matters where the largest amount of money goes to animal husbandry and horticulture. Here we want to clarify that the total funding has been equally divided between the projects to enable the division in to different subject matters. The numbers are therefore pre-

liminary. There are also projects within the food processing area. From Ekhaga foundation a considerable amount of funding went to food processing projects. This is not surprising since an important focus for the foundation is about healthy foods.

Formas has on average financed considerably larger projects than the other funders. Which partly can be explained by the fact that the projects have included competence building through PhD-projects. SLU Ekoforsk, the Swedish Board of Agriculture and SLF have had a pronounced goal that the projects should be put into practice within a short period of time. Lower funds has on average been distributed to each project to enable a larger number of important problem areas to be covered in the calls. Few projects have been interdisciplinary although a system perspective has been a part of many projects where different aspects such as animal production, animal health and environmental impact have been studied.

*Table 2. Organic research funding in Sweden 2008 – 2017 by funder and subject matters, in average during the time period. Source: funder decision protocols, project databases and websites.*

Funder	Million SEK								Total
	Crop production	Biodiversity and ecosystem services	Food products	Animal husbandry	Horticulture	Aqua culture	Business and marketing	Energy	
Formas	53.1	30.3	-	41.1	11.6	2.4	3.2	3.0	145
Formas-CORE Organic	7.0		4.8	13.5	11.3	-	2.5	-	39
SLU Ekoforsk	32.3	0.6	-	21.3	16.8	-	-	-	71
Swedish Board of Agriculture	26.8	0.6	-	11.0	14.4	-	-	-	53
Swedish Farmers' Foundation for Agricultural Research (SLF)	18.0	-	-	18.1	13.9	-	4.3	-	54
Ekhaga foundation	15.2	0.3	5.2	0.6	3.6	-	0.5	-	25
<b>Sum per topic</b>	<b>152</b>	<b>32</b>	<b>10</b>	<b>106</b>	<b>72</b>	<b>2</b>	<b>11</b>	<b>3</b>	<b>387</b>

# Projects

Project titles in Swedish are translated by editor, not confirmed by project leader, original Swedish title in italics.

## SLU EkoForsk 2017–2019

*All project leaders are based at the Swedish University of Agricultural Sciences.*

### Crop production

**Half the surface tilled – a cropping system without heavy tillage, using row hoeing and under sown subsidiary crops**

Grant (SEK): 2 458 000  
Göran Bergkvist, Crop Production Ecology,  
goran.bergkvist@slu.se

**The importance of insect pollination for field bean yield**

Grant (SEK): 2 420 200  
Riccardo Bommarco, Ecology,  
riccardo.bommarco@slu.se

**Swedish organic lentils – cultivation strategies for production of an attractive food crop**

Grant (SEK): 1 656 000  
Georg Carlsson, Biosystems and Technology,  
georg.carlsson@slu.se

**Chrysopidae family and flower strips as habitat management practices for the control of cabbage insect pests**

Grant (SEK): 636 000  
Belén Cotes Ramal, Plant Protection Biology,  
belen.cotes@slu.se

**Are we controlling perennial weeds too late?**

Grant (SEK): 1 995 800  
Theo Verwijst, Crop Production Ecology,  
theo.verwijst@slu.se

### Horticulture

**Control strategies against nightshade and hairy nightshade**

Grant (SEK): 2 469 500  
David Hansson, Biosystems and Technology,  
david.hansson@slu.se

**Fertigation with organic N-fertilizers in organic apple production**

Grant (SEK): 879 000  
Helene Larsson Jönsson, Biosystems and Technology, helene.larsson.jonsson@slu.se

**Development of non-chemical greenhouse control methods against cucumber powdery mildew**

Grant (SEK): 1 298 500  
Erland Liljeroth, Plant Protection Biology,  
erland.liljeroth@slu.se



### Animal husbandry

**Parasite intervention in organic sheep flocks**

Grant (SEK): 1 505 000  
Johan Höglund, Biomedical Sciences and Veterinary Public Health, johan.hoglund@slu.se

**Compact total mixed ration in organic dairy herds – does it improve animal welfare?**

Grant (SEK): 1 799 000  
Mikaela Patel, Animal Nutrition and Management, mikaela.patel@slu.se

**Reduction of Campylobacter in organic meat-type chicken by feeding silage**

Grant (SEK): 1 378 000

Helena Wall, Animal Nutrition and Management, helena.wall@slu.se

**Organic broiler production – hybrids, outdoor range and mapping of problems and factors of success on commercial farms**

Grant (SEK): 2 338 000

Jenny Yngvesson, Animal Environment and Health, jenny.yngvesson@slu.se

**SLU EkoForsk 2014–2016**

*All project leaders are based at the Swedish University of Agricultural Sciences.*

***Ecology and plant protection of organic cropping systems, turnover and recycling of plant nutrients***

**Northern highbush blueberries – crop management in high tunnel and in the open field with emphasis on substrate and nutrients**

Grant (SEK): 1 200 000

Håkan Asp, Biosystems and Technology, hakan.asp@slu.se

**Tomato – combined biological control with microorganisms and biofumigation**

Grant (SEK): 2 498 000

Hanna Friberg, Forest Mycology and Pathology/Centre for Biological Control, hanna.friberg@slu.se

**Apples – application of ARs for protection against storage diseases**

Grant (SEK): 1 624 000

Hilde Nybom, Plant Breeding, hilde.nybom@slu.se

**Cut fallow to replace black fallow – effect on couch grass**

Grant (SEK): 1 092 000

Göran Bergkvist, Crop production Ecology, goran.bergkvist@slu.se

**Potatoes – development of new hybridization material for improved resistance to late blight**

Grant (SEK): 1 069 000

Ulrika Carlson-Nilsson, Plant Breeding, ulrika.carlson@slu.se

**Pelleted fertilizer – optimal placement with regard to nitrogen use efficiency, weeds and grain yields**

Grant (SEK): 1 680 000

Sofia Delin, Soil and Environment, sofia.delin@slu.se

**Functional botanical diversity – a path to robust cropping systems with aphids in focus**

Grant (SEK): 600 000

Velemir Ninkovic, Ecology, velemir.ninkovic@slu.se

**Fusarium in oats and spring wheat – variety and species mixtures for healthy crops with high quality**

Grant (SEK): 1 664 600

Paula Persson, Crop Production Ecology, paula.persson@slu.se



## ***Optimization of animal production systems***

**Dairy cows – Automatic foot spray disinfecting with environmental-friendly hypochlorous acid as alternative to traditional foot bath with polluting copper sulphate or antibiotics**  
Grant (SEK): 899 100  
Christer Bergsten, Biosystems and Technology, christer.bergsten@slu.se

**Livestock on pasture – automatic weighing as an animal health monitoring tool**  
Grant (SEK): 1 666 200  
Katarina Arvidsson, Animal Environment and Health, katarina.arvidsson@slu.se

**Total mixed ration for dairy cows – an economic feeding strategy for organic farmers with automatic milking?**  
Grant (SEK): 2 231 000  
Eva Spörndly, Animal Nutrition and Management, eva.sporndly@slu.se

**Lamb production – animal welfare through breeding**  
Grant (SEK): 578 000  
Erling Strandberg, Animal Breeding and Genetics, erling.strandberg@slu.se



**Deep litter for sheep – plant nutrient value and comparison of straw and reed canary grass as bedding materials**

Grant (SEK): 2 129 700  
Cecilia Palmborg, Agricultural Research for Northern Sweden, cecilia.palmborg@slu.se

**Piglet production – development of an organic production system where batch-wise group weaning is made possible by exploring the natural physiology of the sow**

Grant (SEK): 656 000  
Ylva Sjunnesson, Clinical Sciences, ylva.sjunnesson@slu.se

## **SLU EkoForsk 2011–2013**

*All project leaders are based at the Swedish University of Agricultural Sciences.*

***Ecology and plant protection of organic cropping systems, turnover and recycling of plant nutrients***

**Apple production – protection against storage diseases**  
Grant (SEK): 1 370 100  
Hilde Nybom, Plant Breeding and Biotechnology, hilde.nybom@slu.se

**Cereal cultivars – locally adapted for quality in production and product**  
Grant (SEK): 1 690 000  
Eva Johansson, Agriculture – Farming systems, Technology and Product quality, eva.johansson@slu.se

**Clover seed production – development of odor-based strategies to control seed-eating weevils**  
Grant (SEK): 1 490 000  
Åsa Lankinen, Plant Protection Biology, asa.lankinen@slu.se

**Couch grass – optimal timing of stubble cultivation and cutting of a grass/clover catch crop**

Grant (SEK): 822 000

Lars Andersson, Crop Production Ecology,  
lars.andersson@slu.se

**Faba bean – yield stability in varietal mixtures**

Grant (SEK): 1 000 000

Georg Carlsson, Agriculture – Farming systems, Technology and Product quality,  
georg.carlsson@slu.se

**Northern Highbush Blueberries – Organic Production Systems**

Grant (SEK): 1 474 000

Håkan Asp, Horticulture, hakan.asp@slu.se

**Tomato Production – Balanced Fertilisation**

Grant (SEK): 1 200 000

Birgitta Båth, Crop Production Ecology,  
birgitta.bath@slu.se

**Vegetables – improved weed control effect through prolonged germination period combined with false seedbed and delayed sowing**

Grant (SEK): 2 070 000

David Hansson, Agriculture – Farming Systems, Technology and Product Quality,  
david.hansson@slu.se

**The weed mower - mowing of *Cirsium arvense* and *Tripleurospermum inodorum* in winter wheat and leys for seed production**

Grant (SEK): 1 498 400

Anneli Lundkvist, Crop Production Ecology,  
anneli.lundkvist@slu.se

***Optimization of animal production systems***

**Erysipelas – why are organic laying hen flocks affected**

Grant (SEK): 140 000

Claes Fellström, Clinical Sciences,  
claes.fellstrom@slu.se

**Milk from cereals and high quality herbage only**

Grant (SEK): 754 000

Eva Spörndly, Animal Nutrition and Management, eva.sporndly@slu.se

**Milk production – optimization of protein feeding in relation to economy and environment**

Grant (SEK): 2 625 000

Pekka Huhtanen, Agricultural Research for Northern Sweden, pekka.huhtanen@slu.se

**Mussel meal fed to slow- and fast growing broilers**

Grant (SEK): 752 400

Lotta Jönsson, Animal Breeding and Genetics, lotta.jonsson@slu.se

**Pig production – does leg health in growing finishing pigs improve by change of sire breed?**

Grant (SEK): 1 137 000

Anna Wallenbeck, Animal Breeding and Genetics, anna.wallenbeck@slu.se

**Roundworm infection – pathways on organic laying hen farms**

Grant (SEK): 1 094 000

Johan Höglund, Biomedical Sciences and Veterinary Public Health,  
johan.hoglund@slu.se





## **SLU EkoForsk 2008–2010**

*All project leaders are based at the Swedish University of Agricultural Sciences.*

### ***Ecology and plant protection of organic cropping systems, turnover and recycling of plant nutrients***

**Biological control – utilization selective biodiversity and targeted crop rotation**  
Grant (SEK): 330 000  
Birgitta Rämert, Plant Protection Biology,  
birgitta.ramert@slu.se

**Oilseed rape – nitrogen management strategies**  
Grant (SEK): 1 758 463  
Maria Stenberg, Soil Sciences,  
maria.stenberg@slu.se

**Oilseed radish and mustard – disease saniters with great potential**  
Grant (SEK): 1 921 200  
Paula Persson, Crop Production Ecology,  
paula.persson@slu.se

### **Orchards – new weed control methods**

Grant (SEK): 1 649 000  
David Hansson, Agriculture – Farming systems, Technology and Product quality,  
david.hansson@slu.se

### **Organic apples**

**– improving quality and storability**  
Grant (SEK): 762 100  
Ibrahim Tahir, Plant breeding and Biotechnology, ibrahim.tahir@slu.se

### **Peas – effects of Brassica intercrops**

Grant (SEK): 2 511 000  
Kerstin Berglund, Soil Sciences, kerstin.berglund@slu.se

### **Potato production – faster emergence and earlier tuber development**

Grant (SEK): 1 622 000  
Jannie Hagman, Crop Production Ecology, jannie.hagman@slu.se

### **Thistle mower – an evaluation of a vegetation cutter**

Grant (SEK): 1 094 500  
Anneli Lundkvist, Crop Production Ecology, anneli.lundkvist@slu.se

### **Tomatoes – nitrogen and phosphorous availability**

Grant (SEK): 1 390 000  
Birgitta Båth, Crop Production Ecology, birgitta.bath@slu.se

### **Tussilago farfara – weed management**

Grant (SEK): 1 133 000  
Lars Andersson, Crop Production Ecology, lars.andersson@slu.se

### ***Optimization of animal production systems***

#### **Finishing pigs – lower nitrogen losses and improved hygiene of the outside concrete area**

Grant (SEK): 1 245 700  
Jos Botermans, Rural Buildings and Animal Husbandry, jozef.botermans@slu.se

## Dairy and beef – improved nutritional value in forage

Grant (SEK): 1 800 000

Rolf Spörndly, Animal Nutrition and Management, rolf.sporndly@slu.se

## Ley seed production – development by participatory learning

Grant (SEK): 799 000

Johanna Björklund, Urban and Rural Development, sol@slu.se

## Maize – weed management

Grant (SEK): 1 985 420

Ewa Magnuski, Crop Production Ecology, ewa.magnuski@slu.se

## Milk production based on herbage and cereal feeding – effects on milk and methane production

Grant (SEK): 1 240 000

Eva Spörndly, Animal Nutrition and Management, eva.sporndly@slu.se

## White and red clover seed – increased biodiversity improves pollination

Grant (SEK): 1 662 000

Lars Andersson, Crop Production Ecology, lars.andersson@slu.se

## Formas 2019–2022

### Fostering organic cultivation of grain legumes; a multi-scale feasibility study for soybean and lupin production in Sweden

Ökad ekologisk odling av trönsääd: en flerskalig studie av möjligheterna att producera soja och lupin i Sverige

Grant (SEK): 11 861 251 (2019–2023)

Alexander Menegat, Swedish University of Agricultural Sciences, Crop Production Ecology, alexander.menegat@slu.se

### Increased utilization of ley crops in feed for organic pigs – feeding strategies and influence of dietary inclusion of grass/clover silage on production, fertility, N-emission and pig behaviour

Ökat utnyttjande av vall i foder till ekologiska grisar – utfodringsstrategier och inverkan av gräs/klöverensilage på produktion, fertilitet, N-förluster och beteende

Grant (SEK): 11 926 877 (2019–2023)

Magdalena Åkerfeldt, Swedish University of Agricultural Sciences, Animal Nutrition and Management, magdalena.akerfeldt@slu.se

### Constraints on the expansion of organic farming in Sweden

Vad begränsar expansionen av ekologisk odling i Sverige?

Grant (SEK): 11 961 715 (2019–2023)

Henrik G. Smith, Lund University, Centre for Environmental and Climate Research, henrik.smith@biol.lu.se

### Sustainable organic bread from heritage cereals: using history to form the future

Kulturspannmålens roll för ekologisk spannmålsproduktion och konsumtion - kan vi lära av historien?

Grant (SEK): 11 430 000 (2019–2023)

Karin Gerhardt, Swedish University of Agricultural Sciences, Swedish Biodiversity Centre, karin.gerhardt@slu.se





## Formas 2015–2018

### Perennial crops – key components for robust and sustainable production systems?

Grant (SEK): 2 931 000

Anna Westerbergh, Swedish University of Agricultural Sciences, Plant Biology,  
anna.westerbergh@slu.se

### Biological control of pathogenic micro-organisms in the aquaculture production

Grant (SEK): 2 051 000

Alyssa Joyce, University of Gothenburg,  
Biological & Environmental Sciences,  
alyssa.joyce@bioenv.gu.se

### Encouraging intercropping in Swedish organic farming through participatory research

Grant (SEK): 2 998 000

Erik Steen Jensen, Swedish University of Agricultural Sciences, Biosystems and Technology, erik.steen.jensen@slu.se

### Multifunctional farming systems – linking plant-plant interactions, insect pest control and wildlife

Grant (SEK): 6 836 000

Velemir Ninkovic, Swedish University of Agricultural Sciences, Ecology,  
velemir.ninkovic@slu.se

### Fertilization strategies in organic tomato production

Grant (SEK): 1 488 000

Birgitta Båth, Swedish University of Agricultural Sciences, Crop Production Ecology,  
birgitta.bath@slu.se

### Integrated dairy and beef – effects of low-intensity organic cattle production on land use, environment and economy

Grant (SEK): 3 200 000

Christel Cederberg, Chalmers University of Technology, Energy and Environment,  
christel.cederberg@chalmers.se

### Digestate a valuable fertilizer in organic production with added value for the environment and the farm

Grant (SEK): 4 740 000

Eva Salomon, JTI – Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden),  
eva.salomon@ri.se

### Cost effective support to organic farming to benefit the conservation of biodiversity and ecosystem services

Grant (SEK): 5 367 000

Henrik Smith, Lund University, Conservation biology, henrik.smith@biol.lu.se

### Antibiotics and antibiotic resistance in organic dairy production

Grant (SEK): 4 323 000

Ulf Emanuelson, Swedish University of Agricultural Sciences, Clinical Sciences,  
ulf.emmanuelson@slu.se

### Production of organic beef and other ecosystem services by grazing on a mosaic of pasture and forest

Grant (SEK): 6 447 000

Annemieke Gärdenäs, Swedish University of Agricultural Sciences, Soil and Environment,  
annemieke.gardenas@slu.se



#### **Actor Based Life Cycle Assessment – towards green food chains for eco-products**

Grant (SEK): 2 532 000

Birgit Brunklaus, Chalmers University of Technology, Energy and Environment,  
birgitb@chalmers.se

#### **Effects of fertilisation through nutrient recycling on soil biological functions and plant nutrient uptake and growth in organic crop production**

Grant (SEK): 3 602 000

Sigrun Dahlin, Swedish University of Agricultural Sciences, Soil and Environment,  
sigrun.dahlin@slu.se

#### **Risk factors responsible for development of leg weakness in pigs housed in outdoor organic systems. Studies aimed at clarifying the pathogenesis behind the joint lesions, and find preventive tools**

Grant (SEK): 2 852 000

Stina Ekman, Swedish University of Agricultural Sciences, Biomedical Sciences and Veterinary Public Health, stina.ekman@slu.se

#### **Viral infections in organic dairy herds – risks, biosecurity and resiliency**

Grant SEK): 3 150 000

Nils Fall, Swedish University of Agricultural Sciences, Clinical Sciences, nils.fall@slu.se

#### **FISHWELFARE – Identification of key aspects for ecologically sustainable fish aquaculture under Swedish conditions**

Grant (SEK): 905 000

Björn Frostell, KTH Royal Institute of Technology, Industrial Ecology, frostell@kth.se

#### **The importance of natural enemy diversity and food-web structure for biological control at organic and conventional farms**

Grant (SEK): 4 264 000

Mattias Jonsson, Swedish University of Agricultural Sciences, Ecology,  
mattias.jonsson@slu.se

## **Sustainable supply of organic clover seed – a crucial issue for organic agriculture**

Grant (SEK): 6 009 000

Mattias Larsson, Swedish University of Agricultural Sciences, Plant Protection Biology,

Mattias.Larsson@slu.se

## **Formas 2011–2013**

#### **Effects of land use change on multifunctionality in agroecosystems: Biodiversity and ecosystem services after transition to organic production**

Grant (SEK): 9 486 000

Jan Bengtsson, Swedish University of Agricultural Sciences, Ecology,

jan.bengtsson@slu.se

**Reproduction: the bottleneck in organic pig production – is there a biological management solution?**

Grant (SEK): 3 336 000

Ulf Magnusson, Swedish University of Agricultural Sciences, Chlinal Sciences, ulf.magnusson@slu.se

**Cereal leaf microflora in different agricultural producton systems – implication for biological control of Fusarium**

Grant (SEK): 3 765 000

Paula Persson, Swedish University of Agricultural Sciences, Crop Production Ecology, paula.persson@slu.se

**Development of pest management strategies in organic apple production in collaboration with farmers utilizing complementary biological control strategies**

Grant (SEK): 6 190 000

Birgitta Rämert, Swedish University of Agricultural Sciences, Crop Production Ecology, birgitta.ramert@slu.se

**The role of *Paenibacillus polymyxa* biofilm formation in protection of nursery plantlets against Pythium root rot**

Grant (SEK): 1 853 000

Salme Timmusk, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, salme.timmusk@slu.se

**Breeding strategies for organic animal husbandry**

Grant (SEK): 2 605 000

Anna Wallenbeck, Swedish University of Agricultural Sciences, Animals Breeding and Genetics, anna.wallenbeck@slu.se

**Sustainable livestock management with respect to animal transports and production systems: animal welfare and spread of disease**

Grant (SEK): 3 313 000

Uno Wennergren, Linköping University, Physics, Chemistry and Biology, unwen@ifm.liu.se

## **Formas 2008–2010**

**Dormancy in reproductive vegetative buds in creeping perennials dominating the agricultural weed flora in Scandinavia**

Grant (SEK): 3 301 000

Lars Andersson, Swedish University of Agricultural Sciences, Crop Production Ecology, lars.andersson@slu.se

**Biodiversity and ecosystem services after transitions to organic production**

Grant (SEK): 4 575 000

Jan Bengtsson, Swedish University of Agricultural Sciences, Ecology, jan.bengtsson@slu.se

**Pollination and pest control in organic clover seed production – effect of field and landscape diversification**

Grant (SEK): 2 925 000

Riccardo Bommarco, Swedish University of Agricultural Sciences, Ecology, riccardo.bommarco@slu.se

**Predation rate and prey choice by generalist predators on organic farms**

Grant (SEK): 2 321 000

Barbara Ekbom, Swedish University of Agricultural Sciences, Ecology, barbara.ekbom@slu.se



**Exploiting soil microbial activity to enhance nutrient acquisition and sustainable pathogen control**

Grant (SEK): 2 574 000

Roger Finlay, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, roger.finlay@slu.se

**The green farm – an organic farm self-supplying with energy from renewable sources**

Grant (SEK): 3 030 000

Per-Anders Hansson, Swedish University of Agricultural Sciences, Energy and Technology, per-anders.hansson@slu.se

**Phosphorus feeding in organic dairy production**

Grant (SEK): 708 000

Kjell Holtenius, Swedish University of Agricultural Sciences, Animal Nutrition and Management, kjell.holtenius@slu.se

**Cropping systems in Organic Vegetable Production: The Behavioural and Chemical Basis of Ecological Processes in Brassica Crops**

Grant (SEK): 4 045 000

Richard Hopkins, Swedish University of Agricultural Sciences, Ecology, richard.hopkins@slu.se

**Endophytic fungi in forage grasses**

Grant (SEK): 2 310 000

Kerstin Huss-Danell, Swedish University of Agricultural Sciences, Agricultural Research for Northern Sweden, kerstin.huss-danell@slu.se

**Parasite Management in Organic Cattle**

Grant (SEK): 3 474 000

Johan Höglund, Swedish University of Agricultural Sciences, Biomedical Sciences and Veterinary Public Health, johan.hoglund@slu.se

**Supplying organic farming with plant nutrients – resource and environmental aspects in a life cycle perspective**

Grant (SEK): 3 405 000

Håkan Jönsson, Swedish University of Agricultural Sciences, Energy and Technology, hakan.jonsson@slu.se



**Biological Pest Management in Oilseed Rape for Organic Oil Production**

Grant (SEK): 6 245 000

Johan Meijer, Swedish University of Agricultural Sciences, Plant Biology & Forest Genetics, johan.meijer@slu.se

**Utilization of synergies between enhanced biological control through selective biodiversity and targeted crop rotation**

Grant (SEK): 3 890 000

Birgitta Rämert, Swedish University of Agricultural Sciences, Crop Production Ecology, birgitta.ramert@slu.se

**The role of *Paenibacillus polymyxa* biofilm formation in protection of nursery plantlets against *Pythium* root rot**

Grant (SEK): 1 853 000

Salme Timmusk, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, salme.timmusk@slu.se

**Hempseed (*Cannabis sativa*) as a nutritional resource in organic poultry production**

Grant (SEK): 1 750 000

Helena Wall, Swedish University of Agricultural Sciences, Animal Nutrition and Management, helena.wall@slu.se

**Micronutrient management strategies in organic systems: How to utilize local and site specific resources for sustainable crop and animal production of high quality products?**

Grant (SEK): 7 995 000

Ingrid Öborn, Swedish University of Agricultural Sciences, Soil Science,  
ingrid.oborn@slu.se

**The Swedish Farmers' Foundation for Agricultural Research**

\*-marked projects in cooperation with Formas

**Crop production**

**Half the surface tilled – a cropping system without heavy tillage, using row hoeing, strip sowing, band spraying and under sown subsidiary crops**

*Halva ytan bearbetas – odlingssystem med radhackning, bandsådd, bandsprutning och mellangrödor*

Grant (SEK): 1 900 000 (2018-2020)

Göran Bergkvist, Crop Production Ecology,  
goran.bergkvist@slu.se

**Electrical Weed Destroyer (EWD) – a new technique for mechanical weed control**

*Electrical Weed Destroyer (EWD) – ny teknik för mekanisk ogräskontroll*

Grant (SEK): 569 000 (2017-2018)

Lars Andersson, Swedish University of Agricultural Sciences, Department of Crop Production Ecology, lars.andersson@slu.se

**Breeding of pea for increased resistance to root rot**

*Förädling av ärt för ökad motståndskraft mot rotröta*

Grant (SEK): 1 250 000\* (2014–2017)

Magnus Karlsson, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, magnus.karlsson@slu.se

**Control of insect pests in clover seed crops with biological methods**

*Kontroll av skadeinsekter i klöverfröodlingar med biologiska metoder*

Grant (SEK): 1 766 000\* (2014-2017)

Olle Anderbrandt, Lund University, Biology,  
olle.anderbrant@biol.lu.se

**Increased harvest and crop safety with optimized distribution of seeds in the row at sowing on 25 cm row spacing**

*Ökad skörd och odlingssäkerhet med optimerad fördelning av utsädet i raden vid sådd på 25 cm radaavstånd*

Grant (SEK): 1 297 000\* (2014-2017)

Per Ståhl, Swedish Rural Economy and Agricultural Societies,  
per.stahl@hushallningssallskapet.se

**Effective utilization of slurry and digestate – Online analysis of manure quality that enables balanced fertilization**

*Effektivt utnyttjande av flytgödsel och rötrest – on-lineanalys av gödselkvalitén som möjliggör anpassad gödsling*

Grant (SEK): 1 071 000\* (2014-2017)

Bo Stenberg, Swedish University of Agricultural Sciences, Soil and Environment,  
bo.stenberg@slu.se

**Variety mixing – a robust cropping system**

*Sortblandning – ett robustt odlingssystem*

Grant (SEK): 2 400 000\* (2014-2017)

Velemir Ninkovic, Swedish University of Agricultural Sciences, Ecology,  
velemir.ninkovic@slu.se

**Acidifying and nitrogen supplementing in liquid manure and digestate**

*Surgörning och kvävekomplettering i flytgödsel och biogödsel*

Grant (SEK): 200 000 (2012-2013)

Kjell Gustafsson, Agroväst,  
kjell.gustafsson@agrovast.se

**Climate resilient cropping systems with row hoeing to control root and seed weeds in cereals**

*Klimatrobusta odlingssystem med radhackning mot rot- och fröogräs i stråsäd*

Grant (SEK): 1 200 000 (2011-2016)

Per Ståhl, Hushållningssällskapet Rådgivning Agri AB, per.stahl@hushallningssallskapet.se



**Optimizing preceding crop for improved yield stability in grain legumes**

*Optimering af forfrugt for forbedret dyrkningssikkerhed i trænsæd (OpTrin)*

Grant (SEK): 1 647 000 (2010-2014)

Erik Steen Jensen, Swedish University of Agricultural Sciences, Department of biosystems and technology, erik.steen.jensen@slu.se

**Control of pest insects in clover seed production**

*Kontroll av skadeinsekter i klöverfröodlingar med biologiska metoder*

Grant (SEK): 1 500 000 (2010-2014)

Olle Anderbrandt, Lund University, Biology, olle.anderbrant@biol.lu.se

**Swedish soy bean production for a domestic protein supply**

*Svensk sojaodling för inhemska proteinfoderförsörjning*

Grant (SEK): 900 000 (2010-2013)

Fredrik Fogelberg, JTI – Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden), Fredrik.Fogelberg@ri.se

**Biological soil analysis in field trials – DNA based analysis of soilborne diseases**

*Biologisk markkartering i fältförsök - DNA-baserad analys av jordburna växtsjukdomar*

Grant (SEK): 900 000 (2009-2015)

Anders Jonsson, Swedish University of Agricultural Sciences, anders.jonsson@slu.se

**Fast and secure diagnosis of pathogens in red clover in soil and root and heat treatment of red clover seeds to improve seed quality**

*Snabb och säker diagnos av patogener på rödklöver i jord och rot samt värmebehandling av rödklöverfrö för ökad utsädeskvalitet*

Grant (SEK): 600 000 (2009-2013)

Ann-Charlotte Wallenhammar, HS Konsult AB, ac.wallenhammar@hush.se

**Increased protein and better weed control by intercropping corn and fava beans in organic production**

*Mer protein och minskat ogrästryck genom samodling av majs och åkerböna i ekologisk odling*

Grant (SEK): 950 000 (2009-2013)

Eva Stoltz, Swedish Rural Economy and Agricultural Societies, eva.stoltz@hushallningssallskapet.se

**Biological soil analysis – integrated analysis of soilborne diseases and soil chemistry in oilseed and cereals**

*Biologisk Markkartering- Integrerad analys av jordburna växtsjukdomar och markkemi i oljeväxter och stråsäd*

Grant (SEK): 2 185 000 (2008-2013)

Anders Jonsson, Swedish University of Agricultural Sciences, anders.jonsson@slu.se

## **Horticulture**

### **Fertigation with organic N-fertilizers in Swedish apple production**

*Växtnäringsbevattning med organiska N-gödselmedel i svensk äppelproduktion*  
Grant (SEK): 980 000 (2015-)  
Helene Larsson Jönsson, Swedish University of Agricultural Sciences, Biosystems and Technology, helene.larsson.jonsson@slu.se

### **Producing fresh frozen horse beans/broad beans for Swedish and international markets**

*Utveckling av färskskördad åkerböna/bondböna till den svenska och internationella marknaden*  
Grant (SEK): 320 000 (2015-2017)  
Fredrik Fogelberg, JTI – Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden), Fredrik.Fogelberg@jti.se

### **Development of control strategy against storage diseases in organic apples and pears, a collaborative project**

*Utveckling av bekämpningsstrategi mot lagringsjukdomar i ekologiskt odlade äpplen och päron, ett samverkansprojekt*  
Grant (SEK): 1 920 000\* (2013-2017)  
Marie Olsson, Swedish University of Agricultural Sciences, Plant Breeding, marie.olsson@slu.se

### **Application technique with a focus on biological plant protection**

*Appliceringsteknik med fokus på biologiska växtskyddsmedel*  
Grant (SEK): 1 984 000\* (2013-)  
Klara Löfkvist, JTI – Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden), klara.lofkvist@ri.se

### **Control strategies with short term fallow and interval crops against black and green nightshade in an organic crop rotation with potato, carrot and onion**

*Bekämpningsstrategier med miniträda och avbrottsgrodor mot nattskatta och bågarnattskatta i en ekologisk växtföljd med potatis, morot och lök*  
Grant (SEK): 1 980 000\* (2013-2017)  
David Hansson, Swedish University of Agricultural Sciences, Biosystems and Technology, david.hansson@slu.se

### **Study of the control exerted by natural enemies over aphids and scales in apple orchards and the management factors affecting the natural regulation of pests**

*Studie över naturliga fienders roll vid bekämpning av bladlöss och sköldlöss i äppelodlingar samt odlingsteknikens inverkan på den naturliga regleringen av skadeinsekter*  
Grant (SEK): 2 730 000 (2012-2017)  
Mario Porcel, Swedish University of Agricultural Sciences, Department of Plant Protection Biology, mario.porcel@slu.se

### **Successive development of sustainable cropping systems in long term vegetable experiments**

*Successiv utveckling av hållbara odlingssystem i långliggande grönsaksförsök*  
Grant (SEK): 530 000 (2012-2017)  
Anita Gunnarsson, Swedish Rural Economy and Agricultural Societies, anita.gunnarsson@hushallningssallskapet.se

### **Developing integrated pest management strategies against powdery mildew in greenhouse production of cucumber. Collaboration with farmers.**

*Utveckling av integrerade bekämpningstrategier i växthusgurka i samverkan med odlare*  
Grant (SEK): 1 920 000 (2012-2016)  
Birgitta Rämert, Swedish University of Agricultural Sciences, Department of Plant Protection Biology, birgitta.ramert@slu.se



### **Developing integrated pest control strategies against insect pests in apples. Cooperation with farmers, advisers and researchers.**

*Utveckling av integrerade bekämpningsstrategier mot skadeinsekter i äpple i samverkan med odlare, rådgivare, feromonproducenter och forskare*

Grant (SEK): 3 070 000 (2011-2015)  
Marco Tasin, Swedish University of Agricultural Sciences, Department of Plant Protection Biology, marco.tasin@slu.se

### **Developing integrated pest control strategies against insect pests in cucumbers.**

#### **Collaboration with farmers**

*Utveckling av integrerade bekämpningsstrategier mot skadeinsekter i gurka i samverkan med odlare*  
Grant (SEK): 2 680 000 (2010-2014)  
Birgitta Rämert, Swedish University of Agricultural Sciences, Department of Plant Protection Biology, birgitta.ramert@slu.se

## **Potatoes**

### **Developing new food potato varieties with durable resistance to late blight**

*Framtagning av bladmögelresistenta matpotatissorter för stora delar av Sverige*  
Grant (SEK): 1 900 000 (2015-)  
Erik Andreasson, Swedish University of Agricultural Sciences, Department of Plant Protection Biology, erik.andreasson@slu.se

### **Development of late blight resistant potatoe varieties for the whole of Sweden**

*Framtagning av bladmögelresistenta matpotatissorter för hela Sverige*  
Grant (SEK): 2 000 000\* (2013-2016)  
Ulrika Carlson-Nilsson, Swedish University of Agricultural Sciences, Plant Breeding, ulrika.carlson@slu.se

## ***Broiler chicken & Egg production***

### **Innovative outdoor poultry production**

*Det är inne att vara en utehöna*  
Grant (SEK): 2 497 000 (2017–2018)  
Helena Aronsson, Swedish University of Agricultural Sciences, Department of Soil and Environment, helena.aronsson@slu.se

### **Sustainable production systems for organic chicken meat – Effect of breeding material and production environment on productivity, animal welfare and environmental impact**

*Långsiktigt hållbara produktionssystem för ekologist kycklingkött – Effekt av avelsmaterial och produktionsmiljö på produktivitet, djurvälstånd och miljöbelastning*  
Grant (SEK): 1 650 000\* (2013-2017)

Anna Wallenbeck, Swedish University of Agricultural Sciences, Animal Breeding and Genetics, anna.wallenbeck@slu.se

### **Mapping the intestinal health of organic chicken and efficacy of vaccination against coccidiosis**

*Kartläggning av tarmhälsa hos ekologisk kyckling och effekt av vaccination mot koccidios*  
Grant (SEK): 847 000\* (2013-2016)  
Désirée Jansson, National Veterinary Institute, desiree.jansson@sva.se

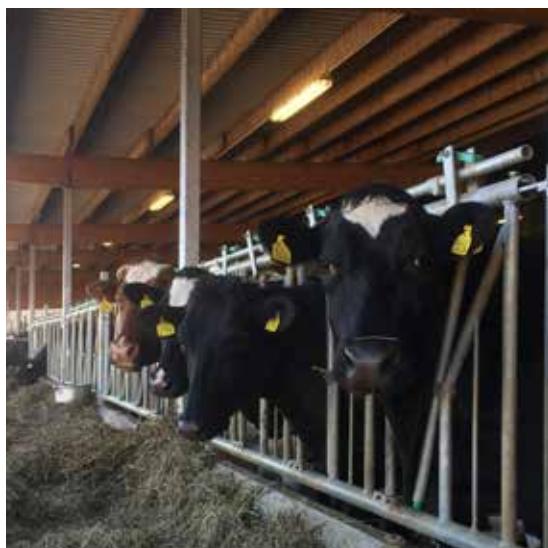
## Dairy

### Producing milk with forage and grain only – an organic model that could be economically viable, but does all cows fit?

Producera mjölk på bara vall och spannmål - en ekologisk modell som kan vara ekonomiskt lönsam, men passar alla kor?

Grant (SEK): 2 595 000\* (2013-2017)

Rolf Spörndly, Swedish University of Agricultural Science, Department of Animal Nutrition and Management,  
rolf.sporndly@slu.se



### How does productivity development affect organic arable farmers profitability over time?

Hur påverkar produktivitetsutveckling ekologiska odlares lönsamhet över tid?

Grant (SEK): 830 000 (2012-2014)

Dennis Collentine, Swedish University of Agricultural Sciences, dennis.collentine@slu.se

### Locally produced feed – optimised and profitable feeding with a possibility for clear consumer communication

Närproducerat foder fullt ut – optimerad och lönsam utfodring med chans till tydlig kommunikation med konsumenten

Grant (SEK): 864 000 (2010-2014)

Anders H Gustafsson, Svensk Mjölk,  
anders.h.gustafsson@vxa.se

### Dairy cows in Sweden and Denmark, put down or dead by natural causes – an epidemiological study

Självdöda eller avlivade mjökkor i Sverige och Danmark – en epidemiologisk undersökning

Grant (SEK): 1 425 000 (2009–2012)

Ulf Emanuelson, Swedish University of Agricultural Sciences, Department of Clinical Sciences, ulf.emmanuelson@slu.se

### Sustainable legumes for a environmentally and cost effective milk production

Uthålliga vallbaljväxter för miljö- och kostnadseffektiv mjölkproduktion

Grant (SEK): 550 000 (2007–2013)

Ann-Charlotte Wallenhammar, HS Konsult AB,  
ac.wallenhammar@hush.se

## Meat

### Field beans to pork in conventional and organic production – properties and usability of different varieties

Åkerböna till gris i konventionell och ekologisk produktion - egenskaper och användbarhet hos olika sorter

Grant (SEK): 1 935 000\* (2013-2017)

Maria Neil, Swedish University of Agricultural Sciences, HUV.Administration@slu.se

### New method for determining virulence of footrot bacteria in sheep

Ny metod för virulensbestämning av fotrötebakterier hos får

Grant (SEK): 995 000\* (2013-2015)

Erik Eriksson, National Veterinary Institute,  
erik.eriksson@sva.se

### Optimised combination with legume silage and other locally produced protein feed to dairy calves

Optimerad kombination av vallbaljväxtensilage och andra näroproducerade proteinfodermedel till mjölkaskalvar

Grant (SEK): 770 000 (2011-2014)

Birgitta Johansson, Swedish University of Agricultural Sciences, Department of Animal Environment and Health

## **Internet based planning for housing systems and buildings in beef production**

*Internetbaserat planeringsunderlag för inhyrsningssystem och byggnader för nötköttsproduktion*

Grant (SEK): 1 110 000 (2009–2013)

Madeleine Magnusson, Swedish University of Agricultural Sciences, Department of Biosystems and Technology,  
madeleine.magnusson@slu.se

## **Totally mixed rations with forage to growing pigs – a possibility to use locally produced feed resources to increase welfare**

*Fullfoder med vallgröda till växande grisar – en möjlighet att utnyttja närländade foderresurser för förbättrad välfärd?*

Grant (SEK): 995 000 (2009–2012)

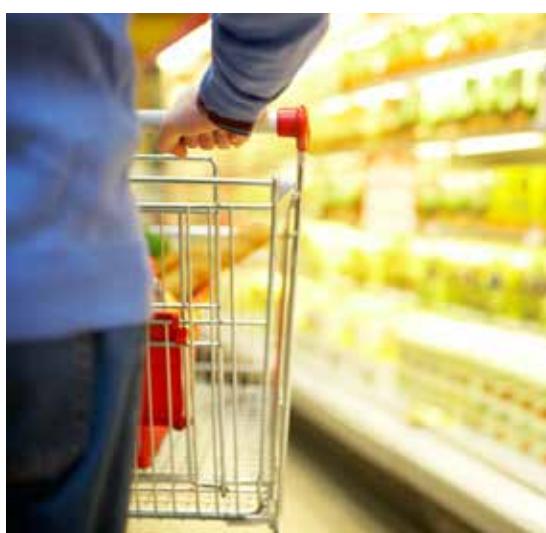
Magdalena Åkerfeldt (former Høek Presto), Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management, magdalena.akerfeldt@slu.se

## **Life cycle analysis (LCA) on meat from Swedish lambs**

*Livscykkelanalys (LCA) av svenska lammkött*

Grant (SEK): 380 000 (2008–2012)

Ulf Sonesson, SIK – the Swedish Institute for Food and Biotechnology, usn@sik.se



## **Roads to profitable, attractive and growing businesses with suckler cow based beef production**

*Vägar till lönsamma, attraktiva och växande företag med dikobaserad nötköttsproduktion*

Grant (SEK): 2 920 000 (2008–2012)

Karl-Ivar Kumm, Swedish University of Agricultural Sciences, Animal Environment and Health, Karl-Ivar.Kumm@slu.se

## **Business**

### **"You don't get anything for nothing" – how can ecosystem services be included in the farm's sustainability work?**

*Tjänster och gentjänster – hur kan ekosystemtjänster inkluderas i jordbruksföretagens hållbarhetsarbete?*

Grant (SEK): 1 999 000\* (2013–2016)

Christel Cederberg, SIK – the Swedish Institute for Food and Biotechnology, christel.cederberg@sik.se

## **Market communication of small-scale food businesses**

*Marknadskommunikation hos småskaliga livsmedelsföretag - fortplantning av budskap och effekter av avtal i värdekedjan*

Grant (SEK): 2 740 000 (2008–2014)

Annika Hallberg, University of Gothenburg, School of Business, Economics and Law annika.hallberg@handels.gu.se

## **Marketing and market creation of organic production and consumption**

*Marknadsföring och marknadsskapande av ekologisk produktion och konsumtion*

Grant (SEK): 410 000 (2007–2016)

Susanne Sweet, Stockholm School of Economics, Department of Marketing and Strategy, Susanne.Sweet@hhs.se



## The Swedish Board of Agriculture

### Crop production

#### Variety testing on organic cereals, pulses and potatoes

*Ekologisk sortprovning*

Annual testing from 1987

Swedish University of Agricultural Sciences,  
Crop Production Ecology,  
[jannie.hagman@slu.se](mailto:jannie.hagman@slu.se)  
[www.slu.se/ekologisksortprovning](http://www.slu.se/ekologisksortprovning)

#### Controlling stem rust (*Puccinia graminis*) in organic wheat

*Begränsa hotet av svartrost på vete i ekologisk odling*

Grant (SEK): 300 000 (2018–)

Anna Berlin, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, [anna.berlin@slu.se](mailto:anna.berlin@slu.se)

#### Effects on sulfur supply to faba beans

*Effekter av svaveltillförsel i åkerböna*

Grant (SEK): 1 428 000 (2017–2019)

Eva Stoltz, Swedish Rural Economy and Agricultural Societies,  
[eva.stoltz@hushallningssallskapet.se](mailto:eva.stoltz@hushallningssallskapet.se)

#### Sulphur and potassium fertilization to organic clover/grass ley

*Svavel- och kaliumgödsling till ekologisk blandvall*  
Grant (SEK): 114 000 (2015)

Ola Hallin, Swedish Rural Economy and Agricultural Societies,  
[ola.hallin@hushallningssallskapet.se](mailto:ola.hallin@hushallningssallskapet.se)

#### EKOKALK: Structure liming for improved soil structure and reduced phosphorus losses in organic farming

*EKOKALK: Strukturkalkning för förbättrad markstruktur och minskade fosforförluster i ekologisk odling?*

Grant (SEK): 1 626 000 (2014–2016)  
Kerstin Berglund, Swedish University of Agricultural Sciences, Soil Sciences,  
[kerstin.berglund@slu.se](mailto:kerstin.berglund@slu.se)

#### Propagation methods for biological control organisms in field crops

*Spridningsmetodik för biologiska nyttodjur i fältodling*

Grant (SEK): 290 000 (2014–)  
Klara Löfkvist, JTI – Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden), [klara.lofkvist@jti.se](mailto:klara.lofkvist@jti.se)

#### Which barley cultivar mixtures should be grown?

*Vilka kornsortblandningar ska man odla?*

Grant (SEK): 200 000 (2014)

Velemir Ninkovic, Swedish University of Agricultural Sciences, Ecology,  
[velemir.ninkovic@slu.se](mailto:velemir.ninkovic@slu.se)

#### Controlling aphids in organic cereal and pulse production

*Bekämpning av bladlöss i ekologisk odling av spannmål och tröndväxter*

Grant (SEK): 183 000 (2013)

Anna Redner, HS Konsult AB,  
[anna.redner@hush.se](mailto:anna.redner@hush.se)

### **Nitrogen effect of organic fertilizers for spring and winter cereals**

Kväveeffekt av organiska gödselmedel till vår- och höstsäd

Grant (SEK): 2 307 000 (2012–2015)

Sofia Delin, Swedish University of Agricultural Sciences, Soil and Environment,  
sofia.delin@slu.se



### **Control of black grass (*Alopecurus myosuroides Huds.*) through various integrated cultivation measures**

Bekämpning av renkavle (*Alopecurus myosuroides Huds.*) genom olika integrerade odlingsåtgärder

Grant (SEK): 1 001 000 (2012–2014)

Anders TS Nilsson, Swedish University of Agricultural Sciences, Biosystems and Technology, anders.ts.nilsson@slu.se

### **Autumn fertilization in organic timothy seed ley**

Höstgödsling i ekologisk timotejfrövall

Grant (SEK): 1 077 000 (2012–2014)

Eva Stoltz, Swedish Rural Economy and Agricultural Societies,  
eva.stoltz@hushallningssallskapet.se

### **Optimal utilization of nitrogen in the use of organic special fertilizer to winter wheat**

Optimalt utnyttjande av kväve vid tillförsel av organiska specialgödselmedel till höstvete

Grant (SEK): 395 050 (2012–2014)

Henrik Nätterlund, Swedish Rural Economy and Agricultural Societies,  
henrik.natterlund@hushallningssallskapet.se

### **Trimming different varieties of organic red clover**

Putsning av olika sorter av ekologisk rödklöver

Grant (SEK): 131 000 (2012–2013)

Henrik Strindberg, Sveriges Frö- och Oljeväxtodlare ek. förening (SFO),  
henrik.strindberg@svenskraps.se

### **Evaluation of new gene sources for weed controlling abilities in winter wheat as an alternative to chemical control**

Utvärdering av nya genkällor för ogräskonkurrerande förmåga i höstvete som alternativ till kemisk bekämpning

Grant (SEK): 200 000 (2012–2013)

Nils-Ove Bertholdsson, Swedish University of Agricultural Sciences,  
nils-ove.bertholdsson@slu.se

### **Presence of free living nematodes in west Swedish soils and their impact on potatoe quality regarding powdery scab and *Rhizoctonia solani*. A pilot study.**

Förekomsten av frilevande nematoder i västsvenska jordar och deras inverkan på potatisens kvalitet avseende rost (TRV) och *Rhizoctonia solani*. En förstudie

Grant (SEK): 50 000 (2011)

Lisa Andrae, Rådhuset Nordfalan,  
lisa@nordfalan.se

### **Organic grass seed establishment in winter wheat**

Etablering av ekologiskt gräsfrö på hösten i höstvete

Grant (SEK): 1 124 000 (2009–2013)

Per Ståhl, Hushållningssällskapet Rådgivning Agri AB, per.stahl@hushallningssallskapet.se

### **The effect on harvest by boron fertilisation of organic red and white clover seeds**

*Inverkan av borgödsling på skörden av röd- och vitklöverfrö i ekologisk produktion*

Grant (SEK): 1 541 000 (2009–2012)

Eva Stoltz, Swedish Rural Economy and Agricultural Societies,  
eva.stoltz@hushallningssallskapet.se

### **Biologic control of soilborne deseases in potatoes – increased peel quality and harvest**

*Biologisk kontroll av jordburna sjukdomar i potatis - ökad skalkvalitet och skörd*

Grant (SEK): 2 008 000 (2009–2011)

Sadhna Alström, Swedish University of Agricultural Sciences, Department of Forest Mycology and Plant Pathology

### **The importance of undersown crops for harvest in first year ley with organic seeds**

*Skyddsgrödans betydelse för skörd och ogräsbestånd i förstaårsvallar med ekologiskt gräsfrö*  
Grant (SEK): 160 000 (2009–2011)

Henrik Strindberg, Sveriges Frö- och Oljeväxtodlare ek. förening (SFO),  
henrik.strindberg@svenskraps.se

### **Variety testing of organic forage grass**

*Ekologisk sortprovning av vallgräs*

Grant (SEK): 1 780 000 (2009–2011)

Magnus A. Halling, Swedish University of Agricultural Sciences, Department of Crop Production Ecology, Magnus.Halling@slu.se

### **Harvest techniques to reduce the risk of spanish slug contamination in silage**

*Skördeteknikförsök i slättervall för möjligheten att minska risken för inblandning av spansk skogssnigel i ensilage*

Grant (SEK): 150 000 (2009)

### **Evaluating different ley varieties for organic cultivation in different parts of Sweden**

*Värdering av vallsorters lämplighet för ekologisk odling i olika geografiska områden i Sverige*

Grant (SEK): 120 000 (2009)

### **Nutrient supply for ley seeds**

*Växtnäringsförsörjning vallfrö*

Grant (SEK): 1 512 000 (2008–2011)

Åsa Käck, Hushållningssällskapet Väst,  
asa.kack@hushallningssallskapet.se

### **More secure cultivation of pulses to mature harvest in organic production**

*Säkrare tröndrädesodling till mogen skörd i ekologisk odling*

Grant (SEK): 2 511 000 (2008–2011)

### **Allelopathic catch crops – effects on diseases and weeds**

*Allelopatiska fånggrödor - effekter på sjukdomar och ogräs*

Grant (SEK): 1 665 000 (2008–2010)

Paula Persson, Swedish University of Agricultural Sciences, Department of Crop Production Ecology, paula.persson@slu.se

### **Optimal cultivation strategies for organic corn to milk production**

*Utforskning av optimala odlingsstrategier för ekomajs till mjölkgårdar*

Grant (SEK): 796 000 (2008–2010)

Hermann Leggedör, . Hushållningssällskapet Rådgivning Agri AB,  
hermann.leggedor@hush.se



**Study of correlation between boron concentration in red clover, soil and seed production**

*Undersökning av korrelation mellan borhalt i rödklöverplanta, jord och fröproduktion*

Grant (SEK): 70 000 (2008)

**Environmentally conscious and persistent cultures with arable crops, vegetables and energy crops 2006–2012**

*Försök med miljömedvetna och uthålliga odlingssystem med jordbruks-, grönsaks- och energigrödor 2006–2012*

Grant (SEK): 4 682 000 (2006–2013)

Per Modig, Hushållningssällskapet i Kristianstad,  
per.modig@hushallningssallskapet.se

**Choosing the right seed rate in different row spacings for organic cereal and fava bean production**

*Val av utsädesmängd vid sådd med olika radavstånd i ekologisk odling av spannmål och åkerböna*

Grant (SEK): 1 301 000 (2006–2011)

Ann-Charlotte Wallenhammar, HS Konsult AB,  
ac.wallenhammar@hush.se

**Thistle control in organic production:**

- through cultures with row hoeing
- sub project to evaluate the effect with very late hoeing and how the row design affects the yield.

*Bekämpning av åkertistel i ekologisk odling:*

- genom odlingssystem med radhackning
- delprojekt för att undersöka effekten av mycket sen hackning och hur radens utseende påverkar avkastningen vid odling på 50 cm radavstånd.

Grant (SEK): 1 532 000 (2006–2011)

Per Ståhl, Hushållningssällskapet Rådgivning Agri AB, per.stahl@hushallningssallskapet.se

**Variety testing of organic ley crops**

*Ekologisk sortprovning av vallväxter*

Grant (SEK): 1 400 000 (2006–2008)

Magnus A. Halling, Swedish University of Agricultural Sciences, Department of Crop Production Ecology, Magnus.Halling@slu.se

**Vitamines in organic legumes and ley**

*Vitaminer i ekologiskt odlade vallbalväxter och gräs*

Grant (SEK): 2 187 000 (2005–2010)

Elisabet Nadeau, Swedish University of Agricultural Sciences, Department of Animal Environment and Health,  
elisabet.nadeau@slu.se

**Biological decontamination methods for organic winter wheat and rye seed**

*Biologiska saneringsmetoder för ekologiskt utsäde av höstvete och höstråg*

Grant (SEK): 974 000 (2005–2008)

Ann-Charlotte Wallenhammar, HS Konsult AB,  
ac.wallenhammar@hush.se

## Horticulture

**Weed and nitrogen leaching verified in an organic rotation with potatoes, carrots, onions and cereals through short term fallow, cover crops and customised tillage**

*Ogräs och kväveläckage kontrolleras i en ekologisk växtföljd med färskpotatis, morot, lök och spannmål via miniträda, mellangröda och anpassad jordbearbetning*

Grant (SEK): 1 107 000 (2017–2019)

David Hansson, Swedish University of Agricultural Sciences, Biosystems and Technology, david.hansson@slu.se



**Strategy for safe organic tomato production – combined disease control by fertilizer, biofumigation and biological control**

*Strategi för säker ekologisk tomatodling - kombinerad sjukdomskontroll genom gödsling, biofumigering och biologisk bekämpning*

Grant (SEK): 1 920 000 (2014–2016)

Anna Mårtensson, Swedish University of Agricultural Sciences, Soil and Environment, anna.martensson@slu.se

**Short term fallow and catch crops – a new strategy against black and green night-shade and free-living nematodes in an organic crop rotation with potato, carrot and onion**

*Minträda och mellangröda - en ny strategi mot nattskatta, bågarnattskatta och frilevande nematoder i en ekologisk växtföljd med potatis, morot och lök*

Grant (SEK): 708 000 (2014–2016)

David Hansson, Swedish University of Agricultural Sciences, Biosystems and Technology, david.hansson@slu.se

**Biological measures for the control of root diseases of strawberry production**

*Åtgärder för bekämpning av rotssjukdomar i jordgubbsodling*

Grant (SEK): 470 000 (2014)

Sammar Khalil, Swedish University of Agricultural Sciences, Biosystems and Technology, sammar.khalil@slu.se



**Biological control of *Acrothecium*-rot in carrots**

*Biologisk bekämpning av Acrothecium-röta i morötter*

Grant (SEK): 1 435 000 (2012–2014)

Margareta Hökeberg, Swedish University of Agricultural Sciences, Forest Mycology and Plant Pathology, margareta.hokeberg@slu.se

**Plant protection in organic raspberry cultivation during extended season**

*Växtskydd i ekologisk hallonodling under förlängd säsong*

Grant (SEK): 592 000 (2012–2014)

Birgitta Svensson, Swedish University of Agricultural Sciences, Biosystems and Technology, birgitta.svensson@slu.se

**Weed control in the early establishment of row-vegetables in organic farming**

*Ogräsbekämpning vid tidig etablering av radodlade grönsaker i ekologisk odling*

Grant (SEK): 1 760 000 (2012–2014)

David Hansson, Swedish University of Agricultural Sciences, Biosystems and Technology, david.hansson@slu.se

**Snail control in organic production of vegetables and berries - continuing 2010 and 2011**

*Kontroll av sniglar i ekologisk produktion av grönsaker och bär (fortsättning 2010 och 2011)*

Grant (SEK): 280 000 (2011-2012)

Birgitta Svensson, Swedish University of Agricultural Sciences, Birgitta.Svensson@slu.se

**Pilot study for developing pest control strategies of raspberry leaf and bud mite in organic rasberry production**

*Förstudie för utveckling av bekämpningsstrategier mot hallonbladgallkvalster i ekologisk odling av hallon*

Grant (SEK): 57 000 (2011)

Birgitta Svensson, Swedish University of Agricultural Sciences, Birgitta.Svensson@slu.se

**Snail control in organic production of vegetables and berries - continuing 2010**  
*Kontroll av sniglar i ekologisk produktion av grönsaker och bär (fortsättning 2010)*  
Grant (SEK): 170 000 (2010)  
Birgitta Svensson, Swedish University of Agricultural Sciences,  
Birgitta.Svensson@slu.se

**Measures for weed control in organic vegetables – before the crop originates and in the early stages**  
*Ogräsbekämpande åtgärder i ekologiska grönsaker - före grödans uppkomst och i dess tidiga utvecklingsstadier*  
Grant (SEK): 1 568 000 (2009-2011)

**How does grafting affect nutrient uptake and yield on organic greenhouse cucumbers?**  
*Hur påverkar ympning växtnäringssuptagnings och avkastning i ekologisk växthusgurka?*  
Grant (SEK): 260 000 (2009)  
Marie Hanson, The Rural Economy and Agricultural Societies (Hushållningssällskapet),  
marie.hanson@hushallningssallskapet.se

**Vole problems in organic fruit production**  
*Sorkproblem i ekologisk fruktodling*  
Grant (SEK): 70 000 (2009)

**Snail control in organic production of vegetables and berries – a pilot study 2009**  
*Kontroll av sniglar i ekologisk produktion av grönsaker och bär - en förstudie 2009*  
Grant (SEK): 250 000 (2009)  
Birgitta Svensson, Swedish University of Agricultural Sciences,  
Birgitta.Svensson@slu.se

**Organic tunnel cultivation of raspberries and blackberries**  
*Ekologisk odling av hallon och björnbär i tunnel*  
Grant (SEK): 1 010 000 (2008–2011)  
Birgitta Svensson, Swedish University of Agricultural Sciences,  
Birgitta.Svensson@slu.se

**Different crops' impact on the occurrence of Northern root-knot nematode and other free living nematodes in organic crop rotation with carrots**

*Olika grödors inverkan på förekomsten av rotgallnematod (*Meloidogyne hapla*) och andra frilevande nematoder i ekologisk växtföljd med morötter*  
Grant (SEK): 626 000 (2008–2010)  
Marie-Louise Albertson Juhlin, The Rural Economy and Agricultural Societies (Hushållningssällskapet), marie-louise.juhlin@hush.se

**Correlation between growing conditions, plant nutrients and yield and development of benchmarks for soil analysis in organic tomato production**

*Samband mellan odlingsförutsättningar, växtnäring och skörderesultat samt utarbetande av riktvärden för jordanalys i ekologisk tomatodling*  
Grant (SEK): 673 000 (2008–2009)  
Elisabeth Ögren, County Administrative Board Västmanland, vastmanland@lansstyrelsen.se

**Litterature review and experience inventory on grafting of cucumbers**

*Genomgång av litteratur och inventering av erfarenheter i ämnet ympning av gurka*  
Grant (SEK): 99 630 (2008)  
Marie Hanson, The Rural Economy and Agricultural Societies,  
marie.hanson@hushallningssallskapet.se



### **Effective strategies for weed control in organic row crops**

*Effektiva ogräsbekämpningsstrategier i ekologiska radodlade grönsaker*

Grant (SEK): 1 383 000 (2006–2008)

David Hansson, Swedish University of Agricultural Sciences, david.hansson@slu.se

### **Organic strawberry production in tunnels and fields**

*Ekologisk produktion av jordgubbar i tunnel och på friland*

Grant (SEK): 600 000 (2006–2008)

Birgitta Svensson, Swedish University of Agricultural Sciences, Birgitta.Svensson@slu.se

### **Weed control in organic fruit production**

*Ogräsbekämpning för ekologisk fruktodling*

Grant (SEK): 1 135 000 (2006–2008)

Sven Axel Svensson, Swedish University of Agricultural Sciences, sven.axel.svensson@slu.se

### **Black currants for organic production**

*Svarta vinbär för ekologisk odling*

Grant (SEK): 1 766 333 (2005–2010)

Kimmo Rumpunen, Swedish University of Agricultural Sciences, Kimmo.Rumpunen@slu.se

## **Biodiversity**

### **Improved survival rate of nestlings on organic fields**

*Förbättrad överlevnad av fågelungar på ekologiska fält*

Grant (SEK): 1 749 000 (2006–2008)

Olle Kvarnback, The Rural Economy and Agricultural Societies, olle.kvarnback@hush.se

## **Animal husbandry**

### **Leakage of phosphorus and nitrogen from outdoor pens for laying hens**

*Läckage av fosfor och kväve från rasthagar för värphöns*

Grant (SEK): 47 000 (2018–)

Helena Aronsson, Swedish University of Agricultural Sciences, Soil and Environment, helena.aronsson@slu.se

### **Improved protein quality of local feed materials by heat treatment**

*Ökad proteinkvalitet på inhemska foderråvaror genom värmbehandling på gårdsnivå*

Grant (SEK): 82 000 (2012)

Mårten Hetta, Swedish University of Agricultural Sciences, Agricultural Research for Northern Sweden, marten.hetta@slu.se

### **Evaluate the impact of feed on organic milk quality through participatory research**

*Genom deltagardriven forskning undersöka inverkan av foderstaten på kvaliteten hos ekologiskt producerad mjölk*

Grant (SEK): 1 065 000 (2009–2012)

Ritha Jonsson, County Administrative Board, Västernorrlands län, ritha.jonsson@lansstyrelsen.se

### **Automatic tether for cattle – evaluation of prototype in full scale**

*Automatiskt bindsle för nötkreatur - utvärdering av prototyp i fullskala*

Grant (SEK): 799 000 (2009–2010)

Kristina Lindgren, JTI - Swedish Institute of Agricultural and Environmental Engineering (now part of RISE – Research Institutes of Sweden), kristina.lindgren@ri.se

### **Mapping of roundworm (*Ascaridia galli*) in Swedish herds of laying hens**

*Kartläggning av spolmask (*Ascaridia galli*) i svenska värphönsbesättningar*

Grant (SEK): 515 000 (2009–2010)

Johan Höglund, Swedish University of Agricultural Sciences, Department of Biomedical Sciences and Veterinary Public Health, Johan.Hoglund@bvf.slu.se

### **100 percent organic feed for poultry**

*100 procent ekologiskt fjäderfäfoder*

Grant (SEK): 1 904 000 (2008–2010)

Helena Wall, Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management, Helena.Wall@huv.slu.se

### **100 percent organic feed for poultry, protein sources and animal welfare**

*100 procent ekologiskt foder till fjäderfä, proteinrävaror och djurvälfärd*

Grant (SEK): 1 056 000 (2008–2010)

Åsa Odelros, Åsa Odelros AB, asa@odelros.se

## **100 percent organic feed for pigs using new crops**

*100% ekologiskt foder till slaktgrisar med nya grödor*

Grant (SEK): 1 073 000 (2008–2010)

Anne-Charlotte Olsson, Swedish University of Agricultural Sciences, Biosystems and Technology,  
anne-charlotte.olsson@slu.se

## **New manure behaviour on outside concrete pen to reduce ammonia losses in organic pig production**

*Ändrat gödslingsbeteende på betongplatta utomhus för minskade ammoniakförluster i ekologisk grisproduktion*

Grant (SEK): 622 000 (2008–2009)

Anne-Charlotte Olsson, Swedish University of Agricultural Sciences, Biosystems and Technology,  
anne-charlotte.olsson@slu.se



## **Intestinal parasites in organic pigs – occurrence of infection in pens**

*Ekogrisars inälvsparasiter - förekomst av smitta i fällorna*

Grant (SEK): 306 000 (2008)

Kristina Lindgren, JTI - Institutet för jordbruks- och miljöteknik (now part of RISE – Research Institutes of Sweden),  
kristina.lindgren@ri.se

## **Mapping of roundworm infection in pullets and laying hens**

*Kartläggning av spolmasksmitta hos unghöns och värphöns*

Grant (SEK): 133 000 (2008)

Therese Schultz, SFS - Svenska Ägg Service AB, kansliet@svenskaagg.se

## **Why do organic pigs have more leg joint remarks at slaughter than conventional pigs?**

*Varför har ekogrisar mer ledanmärkningar vid slakt än konventionellt uppfödda grisar?*

Grant (SEK): 300 400 (2007–2008)

Eva Heldmer, Farm and Animal Health,  
eva.heldmer@svdhv.org

## **Providing amino acids at 100 percent organic pig feed**

*Aminosyraförsörjning vid 100 procent ekologiskt foder till gris*

Grant (SEK): 999 000 (2007–2009)

Maria Neil, Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management, HUV.Administration@slu.se

## **Sustainable milk production based on a large proportion of forage**

*Hållbar mjölkproduktion baserad på stor andel vallfoder*

Grant (SEK): 2 000 000 (2006–2009)

Jan Bertilsson, Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management, Jan.Bertilsson@slu.se

## **Utilization of large forage rations to sheep**

*Utnyttjande av stora givor vallfoder till får*

Grant (SEK): 2 104 000 (2006–2009)

Gun Bernes, Swedish University of Agricultural Sciences, Agricultural Research for Northern Sweden, Gun.Bernes@slu.se

## **Development of a mobile hut for organic pig production**

*Utveckling av en mobil slaktsvinshydda i ekologisk svinproduktion*

Grant (SEK): 1 577 000 (2006–2009)

Eva Salomon, RISE – Research Institutes of Sweden, Eva.Salomon@ri.se

## **Ekhaga foundation**

### **Crop production**

#### **The effect of flower strips on beneficial and pest soil fauna**

*Blomsterremors påverkan på nyttiga och skadliga markdjur*

Grant (SEK): 500 000 (2018-2019)

Maria Viketoft , Swedish University of Agricultural Sciences, Department of Ecology, maria.viketoft@slu.se

#### **Sustainable production of ley-legumes in organic cropping systems**

*Hållbar produktion av vallbaljväxter i ekologiska odlingssystem*

Grant (SEK): 3800 000 (2018)

Ann-Charlotte Wallenhammar, The Rural Economy and Agricultural Societies, Ann-Charlotte. Wallenhammar@hushallningssallskapet.se

#### **Final evaluation of a unique long term experiment, comparing organic and conventionall cropping systems in Önnestad, Skåne**

*Avslutande utvärdering av ett unikt långliggande jämförande odlingsförsök med ekologisk och konventionell odling i Önnestad, Skåne*

Grant (SEK): 750 000 (2016)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@jdb.se

#### **Innovative climate actions in organic production**

*Innovativa klimatåtgärder i ekologisk produktion*

Grant (SEK): 897 000 (2014-2016)

Maria Dirke, Organic Farmers Association Sweden, maria.dirke@ekolantbruk.se

#### **Sustainable production of ley legumes in organic cropping systems**

*Hållbar produktion av vallbaljväxter i ekologiska odlingssystem*

Grant (SEK): 1 817 000 (2014-2016)

Ann-Charlotte Wallenhammar, The Rural Economy and Agricultural Societies, Ann-Charlotte.Wallenhammar@hushallningssallskapet.se

#### **Holistic view on crop protection in organic production. How does organic pesticides affect health and biodiversity?**

*En kunskaps sammanställning: Helhetssyn i växtskyddet i ekologisk odling, samt effekter på hälsa och biologisk mångfald av eko-bekämpningsmedel*  
Grant (SEK): 190 000 (2015)

Maria Wivstad, Swedish University of Agricultural Sciences, EPOK – Centre for Organic Food and Farming, maria.wivstad@slu.se

#### **Sustainable food production in Sweden – to produce and eat from perennial systems, stage 3**

*Hållbar livsmedelsproduktion i Sverige - att odla och äta från perenna system, steg 3*

Grant (SEK): 800 000 (2014-2015)

Johanna Björklund, Örebro University, School of science and technology, johanna.bjorklund@oru.se

#### **Yield stability and sustainability in protein forage crop, faba bean - Utilisation of synergism in plant rhizosphere**

Grant (SEK): 1 824 000 (2013-2015)

Sadhna Alström, Swedish University of Agricultural Sciences, Department of Forest Mycology and Plant Pathology,

#### **Final evaluation of a unique long term comparison of biodynamic, organic and conventional cropping systems**

*Avslutande utvärdering av ett unikt långliggande jämförande odlingsförsök med biodynamisk, ekologisk och konventionell odling*

Grant (SEK): 280 000 (2014)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@jdb.se

#### **Studies of long term soil qualities, fertility, productionability and the quality of the products in biodynamic production.**

*Studier av markens långsiktiga bördighetsegenskaper, produktionsförmåga och odlingsprodukternas kvalitet i biodynamisk odling*

Grant (SEK): 284 000 (2014)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@jdb.se

**Sustainable food production in Sweden – to produce and eat from perennial systems, stage 2**

*Hållbar livsmedelsproduktion i Sverige - att odla och äta från perenna system, steg 2*

Grant (SEK): 1 400 000 (2012-2013)

Johanna Björklund, Örebro University, School of science and technology,  
johanna.bjorklund@oru.se

**Evaluation of biochar and different sorts of manure to increase nutrient husbandry in organic production**

*Utvärdering av biokol och typ av stallgödsel för att förbättra växtnäringshushållningen i ekologisk odling*

Grant (SEK): 250 000 (2012)

Bengt Lundegårdh, Biodynamic Research Institute, bengt.lundegardh@gfok.se

**Multifunctional legumes for organic cropping systems**

Grant (SEK): 1 000 000 (2009-2011)

Erik Steen Jensen, Swedish University of Agricultural Sciences, Department of biosystems and technology,  
erik.steen.jensen@slu.se

**Sustainable food production in Sweden – to produce and eat from perennial systems**

*Hållbar livsmedelsproduktion i Sverige - att odla och äta från perenna system*

Grant (SEK): 400 000 (2011)

Johanna Björklund, Örebro University, School of science and technology,  
johanna.bjorklund@oru.se



**Cultivation measures for complete nutrient supply, high yield and high nutrient quality in organic cropping systems – 2<sup>nd</sup> year**

*Odlingsåtgärder för allsidig växtnäringssörsörjning, god skörd och hög näringsskvalitet i ekologiska odlingssystem – år 2*

Grant (SEK): 700 000 (2010)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@fdb.se

**Using herbs to control late blight in organic potatoe production - increased plant defence and higher yields**

*Örter för bekämpning av bladmögel i ekologisk potatisodling - stärkt växtförsvar och ökad skörd*

Grant (SEK): 700 000 (2008-2010)

Sadhna Alström, Swedish University of Agricultural Sciences, Department of Forest Mycology and Plant Pathology

**Cultivation measures for complete nutrient supply, high yield and high nutrient quality in organic cropping systems**

*Odlingsåtgärder för allsidig växtnäringssörsörjning, god skörd och hög näringsskvalitet i ekologiska odlingssystem*

Grant (SEK): 700 000 (2009)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@fdb.se

**Evaluation of farm based biogas production using solid manure in organic production**

*Utvärdering av gårdsbaserad biogasproduktion med fast stallgödsel i ekologisk odling*

Grant (SEK): 500 000 (2008)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@fdb.se

**The effect of different types of manure and the use of biodynamic preparations to increase soil fertility**

*Verkan av olika former av stallgödsel och användning av biodynamiska preparat för utvecklingen av marken bördighetsegenskaper*

Grant (SEK): 500 000 (2007-2008)

Artur Granstedt, Biodynamic Research Institute, artur.granstedt@fdb.se

### **Using herbs to control late blight in organic potatoe production**

*Örter för bekämpning av bladmögel i ekologisk potatisodling*

Grant (SEK): 500 000 (2007-2008)

Sadhna Alström, Swedish University of Agricultural Sciences, Department of Forest Mycology and Plant Pathology,

### **Are calculations of energy footprint useful to evaluate future possibilities of food production with renewable resources?**

*Är beräkningar av energi-fotavtryck användbara för bedömning av framtidens möjligheter till livsmedelsförsörjning med förnyelsebara resurser?*

Grant (SEK): 250 000 (2007)

Susanne Johansson, Swedish University of Agricultural Sciences

## **Horticulture**

### **Improved quality with innovative crop protection strategies against mildew in organic strawberry tunnel production**

*Förbättra kvalitén med innovativa växtskyddsstrategier mot mjöldagg i ekologisk jordgubbsodling i tunnlar*

Grant (SEK): 740 000 (2018-2019)

Sammar Khalil, Swedish University of Agricultural Sciences, Biosystems and Technology, sammar.khalil@slu.se

### **Ground cover management in organic apple orchards in South Africa: Trade-offs between above- and belowground ecosystem services**

Grant (SEK): 1 480 000 (2015-2017)

Klaus Birkhofer, Lund University, Department of Biology, Klaus.Birkhofer@biol.lu.se

### **Pollinators effect on mineral concentration and storability of organic apples**

*Insektspollinations påverkan på mineralalkoncentration och lagringstid av ekologiska äpple*

Grant (SEK): 200 000 (2016)

Ulrika Samnegård, Stockholm University, Department of Ecology, Environment and Plant Sciences, ulrika.samnegard@su.se

### **Pesticide free strawberry production through seed treatment**

*Pesticidfrei jordgubbsodling via fröbehandling*  
Grant (SEK): 455 000 (2013)

Anna Ohlsson, KTH Royal Institute of Technology, AlbaNova University Center, annao@biotech.kth.se

### **Preparations for the development of an organic and compostable non woven fabric to be used in organic production of perennials**

*Förberedelser för framtagning av helt ekologisk och helt komposterbar fibertäckduk att användas i perennodling i ekologisk produktion*

Grant (SEK): 75 000 (2008)

Lisbeth Andersson, sunnantor2@telia.com

### **Pretreatment of seeds and small plants – for a better life in greenhouses and on fields**

*Förbehandling av frön och unga plantor - för ett bättre liv i växthus och på fält*

Grant (SEK): 500 000 (2008)

Torkel Berglund, KTH Royal Institute of Technology, AlbaNova University Center, torkel@biotech.kth.se

### **The perfect carrot – impact of locally given factors and different cultural measures on the characteristics of organic carrots**

*På jakt efter den perfekta moroten - inverkan av platsgivna faktorer och olika kulturåtgärder på egenskaperna hos ekologiskt odlad morot*

Grant (SEK): 400 000 (2008)

Lars Kjellenberg, Biodynamic Research Institute, lars.kjellenberg@ltj.slu.se

### **Evaluation of organic strawberries regarding salubrity, hardness, taste and content of phenols with antioxidative activity**

*Utvärdering av ekologiska jordgubbar avseende sundhet, hårdighet, smak samt innehåll av fenoler med antioxidativ aktivitet*

Grant (SEK): 500 000 (2008)

Ulrika Carlsson Nilsson, Swedish University of Agricultural Sciences, ulrika.carlson@slu.se

## **Production systems**

### **Future farming – climate adapted, resource effective and highly intensive**

*Framtidens lantbruk - klimatanpassat, resurssnålt, högintensivt*  
Grant (SEK): 1 500 000 (2008-2010)  
Lennart Salomonsson, Swedish University of Agricultural Sciences, Department of Urban and Rural Development

### **Exploring the potential of using stable isotopes as biomarkers for organic food consumption in epidemiological studies**

Grant (SEK): 650 000 (2015-2016)  
Axel Mie, Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, axel.mie@ki.se

### **Trends of cadmium concentrations in organic and conventional wheat from a long-term field experiment**

Grant (SEK): 270 000 (2016)  
Axel Mie, Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, axel.mie@ki.se

### **Is organic food better for your health? The effect on dichlorophenol content in blood plasma and allergic sensitization**

*Är ekologisk mat bättre för hälsan? Effekten av ekologisk mat på halten av diklorofenoler i blodplasma och allergisk sensibilisering*  
Grant (SEK): 1 132 000 (2013-2015)  
Axel Mie, Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, axel.mie@ki.se

### **Nutritional quality of locally adapted cereal cultivars in organic farming**

Grant (SEK): 813 000 (2013-2015)  
Eva Johansson, Swedish University of Agricultural Sciences, eva.johansson@slu.se

### **Screening the uptake of heavy metals in organic greenhouse vegetables**

*Inventering av upptaget av tungmetaller i ekologiskt odlade växthusgrönsaker*  
Grant (SEK): 142 000 (2013)  
Birgitta Båth, Swedish University of Agricultural Sciences, Department of Crop Production Ecology, birgitta.bath@slu.se

### **Differences in micronutrient content of organically and conventionally grown produce: A metabolomics approach**

Grant (SEK): 1 000 000 (2008-2010)  
Axel Mie, Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, axel.mie@ki.se

## **Biodiversity**

### **The general effect of organic farming on biodiversity**

*Den generella effekten av ekologiskt lantbruk på biologisk mångfald*  
Grant (SEK): 350 000 (2010)  
Johan Ahnström, Sävne Skola

## **Animal husbandry**

### **Mapping sources of infection for outbreaks of erysipelas in organic laying hens**

*Kartläggning av smittkällor för utbrott av rödsjuka hos ekologiska värphöns*  
Grant (SEK): 550 000 (2010-2011)  
Helena Eriksson, National Veterinary Institute, helena.eriksson@sva.se

## **Food Science**

### **Food quality and pre-crop value of organic lentils**

*Livsmedelskvalitet och förfruktvärdé hos ekologiskt odlade linser*  
Grant (SEK): 790 000 (2018-2019)  
Georg Carlsson, Swedish University of Agricultural Sciences, Biosystems and Technology, georg.carlsson@slu.se

### **Nutritious and tasty Swedish fermented legumes**

*Näringrika och smakliga fermenterade svenska ekologiska baljväxter*  
Grant (SEK): 1 100 000 (2016-2018)  
Cecilia Mayer, Chalmers University of Technology, Food and Nutrition Science, cecilia.mayer@chalmers.se



#### **Cultivation related nutrient enrichment of raw material**

*Odlingsrelaterad näringssberikning av råvaror*  
Grant (SEK): 800 000 (2007-2009)  
Anna Mårtensson, Swedish University of Agricultural Sciences,  
[anna.martensson@mv.slu.se](mailto:anna.martensson@mv.slu.se)

#### **Business**

#### **Model for strategic planning of locally adapted businesses within organic primary production and processing**

*Modell för strategisk planering av lokalt anpassade företag inom ekologisk råvaruproduktion och förädling*  
Grant (SEK): 480 000 (2010-2011)  
Hans Naess, Agroax, [hans.naess@agroax.se](mailto:hans.naess@agroax.se)

## **CORE Organic Cofund 2018-2020**

**GREENRESILIENT - Organic and biodynamic vegetable production in low-energy GREENhouses – sustainable, RESILIENT and innovative food production systems**  
Coordinator: Fabio Tittarelli,  
[fabio.tittarelli@crea.gov.it](mailto:fabio.tittarelli@crea.gov.it)  
Swedish participant: [beatrix.alsanius@slu.se](mailto:beatrix.alsanius@slu.se)

#### **ProRefine - Refined forage legumes as local sources of protein feed for monogastrics and high quality fibre feed for ruminants in organic production**

Coordinator: Steffen Adler,  
[steffen.adler@nibio.no](mailto:steffen.adler@nibio.no)  
Swedish participant: [david.parsons@slu.se](mailto:david.parsons@slu.se)

#### **PROYOUNGSTOCK - Promoting young stock and cow health and welfare by natural feeding system**

Coordinator: Anet Spengler,  
[anet.spengler@frib.org](mailto:anet.spengler@frib.org)  
Swedish participants: [nils.fall@slu.se](mailto:nils.fall@slu.se) & [karin.alvasen@slu.se](mailto:karin.alvasen@slu.se)

#### **MIX-ENABLE - Mixed livestock farming for improved sustaiNABiLity and robustnESt of organic animal production**

Coordinator: Guillaume Martin,  
[guillaume.martin@inra.fr](mailto:guillaume.martin@inra.fr)  
Swedish participants: [david.parsons@slu.se](mailto:david.parsons@slu.se)  
& [gun.bernes@slu.se](mailto:gun.bernes@slu.se)

#### **FreeBirds - Optimising the use of the free range as the key to improve organic chicken production**

Coordinator: Stefan Gunnarsson,  
[stefan.gunnarsson@slu.se](mailto:stefan.gunnarsson@slu.se)

#### **POWER - Proven welfare and resilience in organic pig production (conditionally approved)**

Coordinator: Anne Grete Kongsted,  
[anne.kongsted@agro.au.dk](mailto:anne.kongsted@agro.au.dk)  
Swedish participants: [eva.salomon@ri.se](mailto:eva.salomon@ri.se) & [lotten.wahlund@ri.se](mailto:lotten.wahlund@ri.se)

#### **SUSORGPLUS - Development of smart and low energy input processing chains, natural food additives and colourants, and supportive material for a code of practice to increase sustainability and consumer acceptance of organic food stuffs**

Coordinator: Barbara Sturm,  
[Barbara.Sturm@uni-kassel.de](mailto:Barbara.Sturm@uni-kassel.de)  
Swedish participant: [girma.geresenbet@slu.se](mailto:girma.geresenbet@slu.se)

**BioVine - Plant diversity in the vineyard can help controlling grapevine pests**

Coordinator: Vittorio Rossi,  
vittorio.rossi@unicatt.it

**DOMINO - Innovative orchard management enhances soil fertility, biodiversity and economic sustainability**

Coordinator: Davide Neri, d.neri@univpm.it

**GraZyDaiSy - Cows meet their natural needs through health-support, grazing and cow-calf-togetherness**

Coordinator: Mette Vaarst,  
mette.vaarst@anis.au.dk

**ProOrg - How to make the best choice for careful, minimal and mild processing methods**

Coordinator: Flavio Paoletti,  
flavio.paoletti@crea.gov.it

**SUREVEG - new diversified cropping systems for vegetables**

Coordinator: Hanne Lakkeneborg Kristensen,  
hanne.kristensen@food.au.dk

**PRODIVA: Crop diversification and weeds**

Coordinator: Bo Melander, Department of Agroecology, Aarhus University, Denmark  
Swedish participants: theo.verwijst@slu.se, anneli.lundkvist@slu.se

**ECOORCHARD: Innovative design and management to boost functional biodiversity of organic orchards**

Coordinator: Lene Sigsgaard, UCPH, Denmark  
Swedish participant: mario.porcel@slu.se

**PROPara: Tackling the parasitological challenges in organic ruminant farming practices**

Coordinator: Spiridoula Athanasiadou, SRUC, United Kingdom  
Swedish participant: johan.hoglund@slu.se

**ORGANICDAIRYHEALTH: Improving animal health and welfare in organic cattle milk production through breeding and management**

Coordinator: Jan Tind Sorensen, Aarhus University, Denmark  
Swedish participant: anna.wallenbeck@slu.se

**EcoBerries: Innovative and eco-sustainable processing and packaging for safe, high quality and healthy organic berry products**

Coordinator: Marie Alminger, Chalmers University of Technology, Sweden  
Swedish participants:  
marie.alminger@chalmers.se, lilia.ahrne@sp.se

**SusOrganic: Development of quality standards and optimised processing methods for organic produce**

Coordinator: Barbara Sturm, University of Kassel, Germany  
Swedish participant:  
girma.gebresenbet@slu.se

## **CORE Organic Plus 2015–2018 – Projects with Swedish researchers**

**FertilCrop: Fertility building management measures in organic cropping systems**

Coordinator: Andreas Fliessbach, Research Institute of Organic Agriculture (FiBL), Switzerland  
Swedish participant: maria.stenberg@slu.se

**ReSoLVe: Restoring optimal Soil functionality in degraded areas within organic Vineyards**

Coordinator: Edoardo Costantini, Research Centre for Agrobiology and Pedology, Italy  
Swedish participant: anna.martensson@slu.se

## **CORE Organic II 2011–2013 – Projects with Swedish Researchers**

### **COBRA: Coordinating Organic plant Breeding Activities for Diversity**

Coordinator: Dr Thomas Döring, The Organic Research Centre, United Kingdom.

Swedish participant:  
nils-ove.bertholdsson@slu.se

### **Healthy Growth: From niche to volume with integrity and trust**

Coordinator: Egon Noe, Agroecology, Aarhus University, Denmark.

Swedish participant:  
rebecka.milestad@abe.kth.se

### **Softpest multitrap: Management of straw- berry blossom weevil and European tarnished plant bug in organic strawberry and raspberry using semiochemical traps**

Coordinator: Atle Wibe, Bioforsk – Organic Food and Farming Division, Norway.

Swedish participant: akbk@kth.se

### **HealthyHens: Promoting good health and welfare in European organic laying hens**

Coordinator: Ute Knierim, Department of Farm Animal Behaviour and Husbandry, Faculty of Organic Agricultural Sciences, University of Kassel, Germany.

Swedish participant:  
stefan.gunnarsson@slu.se

### **ICOPP: Improved contribution of local feed to support 100 % organic feed supply to pigs and poultry**

Coordinator: John E. Hermansen, Dep. of Agroecology and Environment, Faculty of Agricultural Sciences, University of Aarhus, Denmark.

Swedish participant: maria.neil@slu.se

### **SafeOrganic: Restrictive use of antibiotics in organic animal farming – a potential for safer, high quality products with less antibiotic resistant bacteria**

Coordinator: Søren Aabo, Technical University of Denmark, National Food Institute, Denmark.

Swedish participant: bjorn.bengtsson@sva.se

## **Core Organic I 2008–2010 – Projects with Swedish Researchers**

### **COREPIG: A tool to prevent diseases and parasites in organic pig herds**

Coordinator: Tine Rousing Nielsen, University of Aarhus, Faculty of Agricultural Sciences, Dept. of Animal Health, Welfare and Nutrition.

### **PHYTOMILK: What makes organic milk healthy?**

Coordinator: Anne-Maj Gustavsson, Swedish University of Agricultural Sciences, Agricultural Research for Northern Sweden.

### **PathOrganic: Assessing and reducing risks of pathogen contamination in vegetables**

Coordinator: Angela Sessitsch, AIT Austrian Institute of Technology GmbH, Bioresources Unit.



*EPOK – Centre for Organic Food and Farming  
at the Swedish University of Agricultural Sciences  
(SLU) works with collaboration and communication  
within organic agriculture research in a Swedish,  
Nordic and international perspective.*

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