ICROFS news
4/2013
December
Newsletter from the International Centre for Research in Organic Food Systems

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CORE Organic Plus call launched

Your input to *ICROFSnews*

We listen to our readers' response with pleasure, as we are here for you!
Therefore, any response are more than welcome, be it about the format, suggestions to improvements, changes, content or anything you can think of.

Contact us at: LindaS.Sorensen@icrofs.org

CORE Organic Plus call launched

CORE organic II

CORE Organic hereby publishes a joint call for transnational research pre-proposals in organic food and farming systems. The call budget is more than 11 million euros including the European Union contribution of 3 million euros for research and administration. The call announcement, guideline for applicants, a compilation of national rules and a Q&A are published at the CORE Organic website www.coreorganic.org. The call for pre-proposals will close 25 February at 13.00 CET. Read more at http://www.coreorganic.org/

New Organic RDD 2 projects funded

The board of GUDP has decided which projects will be funded in the first round of Organic RDD 2. 67 million DKK will be awarded to seven projects. A total of 120 million DKK was set aside for research and development in organic agriculture 2013-2015. The projects will be coordinated by ICROFS and all have focus on practical use for farmers and enterprises. "The new funding gives a boost so that the positive development, that research in organic agriculture has had since 1996, can be continued. Denmark is a leader in organic agriculture internationally, and this will strengthen our position" states the new chairman of ICROFS' board, Mette Wier.
Read fact sheet on Organic RDD 2: http://www.icrofs.org/pdf/Organic%20RDD%202_UK_factsheet.pdf

New chairperson of the board of ICROFS

A new board with a new chairperson for ICROFS has been appointed by the Danish Minister of Food, Agriculture and Fisheries in relation to the extension of the international mandate of ICROFS for the period of 2013 to 2017. Professor Mette Wier takes on the role as chairperson. Read more at www-icrofs.org.

Organic Eprints news

Organic Eprints (www.orgprints.org) is one of the largest agricultural archives in the world! In the figure, you can see that Organic Eprints is the fifth largest when it comes to full text papers available as open access. The other big archives are about agriculture in general, while Organic Eprints is exclusively about organic agriculture and agroecology, so even though it has much less documents than FAO or USDA, it is an impressive collection of papers on organics.

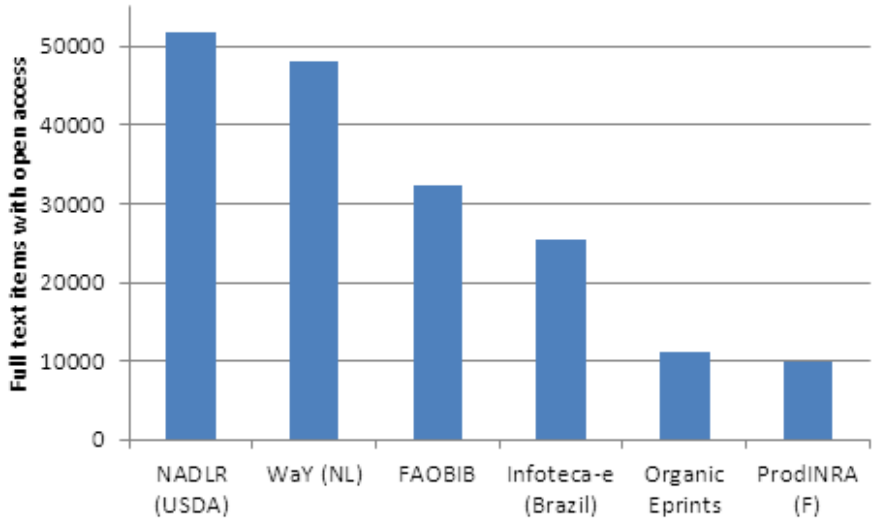
Latest new documents

You can always see the documents from the last week here: http://orgprints.org/cgi/latest . You may find papers about such different subjects as certification, terroir, manure, rainbow trout and multi-criteria assessment of organic farming.

Organic eprints

You can also save an RSS-feed in your browser, so that you can see the latest 20 eprints by using this link: http://orgprints.org/cgi/latest_tool?output=RSS2 .

How it appears depends on your browser, so if it doesn't look very good, try another browser, e.g. Internet Explorer 11. In Explorer (and possibly also other browsers), you can change the number of eprints you get to view.



Links to the shown archives above:

NADLR (USDA)	http://naldc.nal.usda.gov/naldcPUB/home.xhtml
WaY (NL)	http://library.wur.nl/way/
FAOBIB	http://www4.fao.org/faobib/
Infoteca-e (Brazil)	http://www.infoteca.cnptia.embrapa.br/
Organic Eprints	http://orgprints.org/
ProdINRA (F)	http://prodinra.inra.fr/?locale=en

International organic research

ICROFS' fifth topic theme: Organic research in Australia

ICROFS news presents three articles from research activities in Australia. One general article with an introduction to organic agriculture and research in Australia.
Furthermore we are presenting an article about the profile of Australian organic consumers and finally about childrens behaviour and pesticide exposure.

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Research activities on organic agriculture in Australia

Current organic research programmes and projects in different countries

In this issue - and in forthcoming issues - *ICROFS news* will bring a number of topic themes presenting current research programmes in different countries on the globe.

Organic Agriculture and Research in Australia

By Dr Liza Oates; RMIT University, Melbourne, Australia

Australia has the largest certified organic surface area globally, covering an area of around 12 million hectares which is nearly 3% of Australia's total agricultural land. However, despite having around a third of all organically managed land worldwide (97% of this is extensive grazing land), Australia accounts for only 1% of global organic producers.

The most recent Australian Organic Market Report (AOMR) valued the domestic organic market at A$1.276billion (€863 million), up from A$946million (€639 million) in 2010. Overall the report shows the consolidation of a maturing organic industry with sustained growth above global averages. Although two-thirds of Australian households have bought organic food in the past year public funding for research and education is lacking.

Regulatory environment

In Australia 'The National Standard for Organic and Bio-Dynamic Produce' (aka 'The Standard') defines what can be considered as 'organic' for the export market, and 'The Australian Standard for Organic and Biodynamic Products' (AS 6000) defines the domestic market.

Australian standards, like most others, refer not only to avoiding the use of substances that are foreign to nature, but also to applying practices that promote local, renewable resources, maintain diversity and consider animal welfare.

The Australian Quarantine & Inspection Service (AQIS) oversees the certification of organic products bound for the export market and approves third party certifying bodies, to provide accreditation and verification services to organic operators (primary producers, food handlers, processors and retailers). Any permitted inputs must satisfy the principles of organic production and are permitted on the basis of necessity and evidence of environmental safety, and protection of human and animal welfare. Currently there are eight certifying bodies and domestic logos. The two major certifying bodies, Australian Certified Organic (ACO) and The National Association for Sustainable Agriculture Australia (NASAA), are not for profit organisations and between them they cover over 90% of the Australian market. The peak industry body, The Organic Federation of Australia (OFA) has been campaigning for a number of years for a single identifiable Australian organic logo to reduce consumer confusion.

Organic research in Australia

Sadly financial support for research in the organic sector in Australia is minimal. In recent years government contribution via the Rural Industries Research and Development Corporation (RIRDC) has all but dried up and there is little dedicated public funding for organic research or education. The majority of projects appear to be conducted by a handful of interested academics, and their PhD candidates, with some financial support from the organic sector. Examples of projects include:

- Issues for emerging industries in developing policy: a case study of the role of data collection in policy development for the Australian organic industry.
- Combining government regulation with private industry environmental certification schemes for farmers.
- Monogastric feed supplementation: alternative protein sources.
- Comparative sustainability of biodynamic and orga-

nic cattle production in the Dorrigo-Ebor region, NSW.
• Effect of alternative cropping management on soil organic carbon.
• Effect of seaweed on plant growth and development: mechanisms affecting plant responses.
• Next Generation Environmental Management (including a focus on organic case studies and their contribution to environmental benefit).
• Children's Health, Behaviour and Environmental Chemical Exposures.
• Sustainable Food Consumption: Investigating the Role of Marketing Communications in Consumer Purchase Intentions of Organic Foods.
• Australian Organic Market Report 2014 (biennial publication).

Researchers at Swinburne University have also recently spearheaded a new book entitled 'Organics in the global food chain'; which investigates the role of organic food as an alternative to the normal staple diet and explores the origins and drivers of organic food.

Other interesting projects include the Australian Organic Schools program which educates children about where their food comes from and the benefits of organics for health and the environment. The program provides free teaching resources to "support schools to grow organic food, integrate food growing and preparation into the schools' curriculum, and contribute to whole-school environmental sustainability" (www.organicschools.com.au).
One area that has attracted the attention of organic researchers in Australia is the profiling of the elusive organic consumer.

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Organic Consumer Profiling

By Dr Liza Oates and Prof Marc Cohen; RMIT University, Melbourne Australia

Improved understanding of the characteristics, behaviours and beliefs of high end organic consumers may help to inform marketing strategies aimed at increasing organic sales.

At present there is a lack of clear consensus regarding the profile of Australian organic consumers. Much of the previous research targets the wider population and often classifies 'organic consumers' as anyone who reports consuming organic food in the previous 12 months.

More recently two online surveys were conducted by RMIT University targeting dedicated Australian organic consumers, those who make a deliberate attempt to consume organic food on a weekly, if not daily basis. The Organic Consumption Survey (OCS) (N=318) and the Organic Health and Wellness Survey (OHWS) (N=404) investigated the characteristics, consumption patterns, behaviours and beliefs of respondents.

Socio-economic characteristics

Organic consumers are found in all socio-economic and demographic segments. In both surveys there were around four times as many female as male respondents. The majority of respondents were young to middle-aged, living in urban areas and were born in Australia. Only around a third of respondents were overweight or obese, which is substantially lower than the Australian average. Income did not appear to have a strong impact on organic uptake but around two thirds of respondents held a tertiary degree qualification with over a third holding post-graduate degrees. Similar findings regarding gender, age, BMI, income and education were also recently revealed in French and Dutch surveys investigating organic food consumers.

Consumption patterns

According to the 2012 Australian Organic Market Report (AOMR), 65% of households claimed to have purchased some organic food in the previous 12 months. However, the majority of households estimate that this constitutes less than 20% of the cost of their food purchases and the organic industry only commands around 1% of the total value of the food and beverage market. Only 14% said they spent more than half of their house-hold food-spend on organic options. However the number of people who report occasional organic purchases is increasing.

The OCS and OHWS revealed that socio-demographic characteristics did not appear to differ with the level of organic consumption. The proportion of respondents who claimed to consume mostly organic food (i.e. >65%) was in excess of 60% in both surveys although the percentage that consumed mostly 'certified organic' food was lower (50.1% in the OHWS and 37.4% in the OCS).

The choice to consume organic food is not consistent across all food categories. In the RMIT surveys organic fruit and vegetables had the highest uptake and animal flesh products the lowest. This is consistent with results from the most recent AOMR and other surveys. Interestingly respondents who did eat conventional fruit and vegetables were around three times more likely to peel them than they would organic fruit and vegetables, however this practice may result in a loss of nutrients.

The 2012 AOMR reported that supermarkets were the main outlet for people purchasing organic products with approximately three quarters of respondents using this option for at least some products. The availability of organic foods in supermarkets has been facilitated by the larger supermarket chains stocking over 500 organic lines including their own private labels (organic home brands).

However those with higher organic consumption levels appear to engage in multi-channel purchasing, favouring outlets such as grocers, wholefood stores, markets and online suppliers.

Consumer beliefs and behaviours

Attitudes, beliefs and personal values are a stronger predictor for organic consumption than socio-demographic characteristics although there is a disparity between consumers' positive attitudes towards organic food and their levels of actual purchasing. In order to increase sales in the organic sector a key challenge is to convince existing consumers to purchase more organic products.

Several clear trends emerge as major motivators for organic purchasing; with concern for health and the natural environment being the strongest motivators, and superior product quality of less importance. In the RMIT surveys dedicated organic consumers expressed substantial concerns about the effects of pesticides on human health and the environment and their purchasing behaviour was driven more by risk aversion than nutritional superiority. Cost and convenience appeared to become less important in those with higher levels of organic food consumption.

Around a quarter of OCS respondents said that health related concerns influenced their decision to consume organic foods and the majority said that scientific evidence influenced their beliefs about organic food. Respondents to the OHWS held strong beliefs around the ability of organic diets to prevent a range of conditions including cancer, allergic conditions as well as behavioural and developmental problems in children. This suggests that respondents are aware of the current, albeit limited, evidence on the health impact of pesticides and the benefits of organic diets.

The OHWS found that more than three quarters of respondents perceived their overall health to be better since moving to an organic diet, with specific improvements in: resistance to and recovery from illness, physical energy, condition of skin/ hair/ nails, mental alertness, mood stability, and sense of satiety. Many respondents also referred to psychological benefits from purchasing products they believe reflect their personal values. Despite the non-representative, self-selected sample used, these results are consistent with similar studies in Australia and abroad.

Improved understanding of the characteristics, behaviours and beliefs of high end organic consumers may help to inform marketing strategies aimed at increasing organic sales. This would be supported by future research into the potential health and wellness benefits of organic diets and the deleterious effects of dietary pesticide exposure.

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Children's Behaviour and Pesticide Exposure:
Can organic food make a difference?

By Prof Marc Cohen; RMIT University, Melbourne Australia

Current knowledge suggests that childhood exposure to environmental toxins plays a significant role in the development of many childhood illnesses and behavioural issues, and may lead to the development of chronic diseases in later life.

Preliminary evidence has linked exposure to organophosphate pesticides (OPs) with childhood behavioural deficits. Diet appears to be the major source of exposure and the provision of an organic diet has been shown to drastically reduce children's OP exposure. The psycho-social impacts of environmental toxin exposure are potentially profound because even mild degrees of impaired social functioning in otherwise healthy individuals can have important adverse effects over a child's lifetime.

Children's risk of environmental exposures

It is clear that children are a particularly vulnerable group who are at much greater risk from toxin exposures than adults. Children have a higher food, fluid and air intake per kilogram of body weight, a higher metabolic rate and absorption of toxins and a much longer latency period in which to develop chronic disease.

Children also have developing organ systems and immature detoxification and immune function, so toxin exposure during sensitive windows of development may lead to lifelong consequences.

In late 2012 the US-based Pesticide Action Network published a review of the scientific literature titled "Generation in Jeopardy: How pesticides are undermining our children's health and intelligence". It reviewed the many studies demonstrating that pesticides compromise children's cognitive function and that early exposure to pesticides leads to chronic disease later in life. More recently, a risk assessment study calculated the risks of cancer and non-cancer health effects for Californian children based on published dietary and food toxin data. This study reported that all children were being exposed to toxins in their diets at levels that cause harm.

Human pesticide exposure studies

Current knowledge of the extent of OP exposure in the general population is extremely limited, yet preliminary evidence suggests a link between OP exposure and childhood behavioural deficits. Prenatal OP exposure at levels found in the general population has been associated with shorter gestational age and reduced birth-weight along with poorer intellectual development and higher prevalence of ADHD in children at age 7.

A recent study of pesticide exposure in Australian children, examined 340 preschool children aged 2.5 - 6 years from urban, periurban and rural areas of South Australia. This study reported that children were exposed to multiple pesticides, including OPs, at levels higher than those reported in other counties with comparable data. The study also found that urinary pesticide metabolite levels correlated with levels of adaptive and problem behaviours.

The impact of an organic diet on exposure

While there is only limited data on the direct health effects of chronic, low-dose OP exposure in human populations, a few studies have used biomonitoring to demonstrate that consumption of organic food may reduce OP exposure in children. In 2003 Curl and colleagues reported that children who consumed organic fruit, vegetables and juice had significantly lower levels of OP metabolites in their urine than children consuming conventionally produced food. The reduction in exposure levels were sufficient to reduce the children's OP exposure levels from a range of 'uncertain risk' to' negligible risk', based on the U.S. Environmental Protection Agency's guidelines.

A further study went on to demonstrate that substituting organic food for most of a child's conventional diet for 5 days led to a reduction in selective OP metabolites to non-detectable or close to non-detectable levels. While

these studies suggest that children's exposure to OP pesticides is largely through their diet and that consumption of organic food can reduce these exposures, neither study included any measures of health effects so the clinical relevance of these findings remains unclear.

The American College of Paediatrics Council on Nutrition and the Council on Environmental Health recently published a position paper titled 'Organic Foods: Health and Environment Advantages and Disadvantages' that reported; "organic diets have been convincingly demonstrated to expose consumers to fewer pesticides associated with human disease." At a press interview the lead author of this report, Dr Joel Forman, stated:
"At this point, we simply do not have the scientific evidence to know whether the difference in pesticide levels will impact a person's health over a lifetime, though we do know that children – especially young children whose brains are developing – are uniquely vulnerable to chemical exposures . . . . We hope that additional research will improve our understanding of these issues, including large studies that measure environmental exposures and neurodevelopment." (American Academy of Pediatrics 2012)

The need for further research

While it is becoming clear that there is a link between pesticide exposure and aberrant childhood behaviours and that organic food can dramatically reduce pesticide exposure, many questions remain such as: What is the impact of confounding factors such as exposure to lead and mercury, which also adversely impact on childhood behaviour? Do genetic differences in detoxification enzyme pathways responsible for the elimination of pesticides influence how children respond to pesticide exposures? Can the provision of organic food and subsequent lowering of pesticide exposure result in any improvement in children's behaviour or cognitive function?

These questions are currently being addressed by researchers at RMIT University in Australia, who are seeking international collaborators to conduct studies in multiple locations.

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Dynamic controlled atmosphere for storage of organic apples

By Lillie Andersen, Department of Food Science, Aarhus University, Aarslev and
Dirk Köcpke, Department of Fruit Quality and Fruit Storage, Esteburg- Fruit Growing Centre, Jork, Germany

Organic apples can be stored for a period of five month with a high quality after storage at dynamic controlled atmosphere, but the subsequent shelf life quality is rapidly reduced although better than at ambient air storage.

The yield in organic apples in Denmark is less than one-third of the conventional production, which is round 40 tons/ha. Furthermore there is a significant loss during storage. The low yield and the high loss during storage is a waste of resources. Therefore, alternative methods to increase yield and maintain quality during storage are extremely important to develop and evaluate.

During storage respiration from the apples will decrease the quality of the apples. Therefore the apples are kept at low temperature (+1°C depending on cultivar) to minimize respiration and oxygen content at the storage room can be lowered to reduce respiration from the apples as much as possible without creating anaerobic conditions.

New technique: Dynamic controlled atmosphere

A new storage technique, dynamic controlled atmosphere (DCA)1 is based on an online monitoring of the responses from the stored apples to the lowering of oxygen during storage. By measuring the chlorophyll fluorescence from the apples, the critical oxygen content can be assessed online and without opening the storage room. Below the anaerobic compensation point, which is specific for each variety the fluorescence from the apples will increase. This information can be used to adjust the oxygen content dynamically during the storage just above the anaerobic compensation point.

During the first weeks of storage the responses from the apples are monitored for anaerobic conditions using fluorescence from the apples as control. When no change in fluorescence is observed, the oxygen content is slowly lowered to the so-called anaerobic compensation point. When the first sign of anaerobic conditions is observed by a change in chlorophyll fluorescence, the oxygen content in the storage atmosphere is raised to a level just about the anaerobic conditions. The critical oxygen level is not a fixed value, but varies between 0.3 to 0.6% oxygen, depending on variety, ripeness and year.

The technique has shown promising results in research in organic apples in Germany where researchers at Fruit Research Station Jork, have been working with the method for some years. The results have shown that quality as firmness is better and storage rot less compared to traditional controlled atmosphere at steady low oxygen, controlled atmosphere (CA) of apples. Moreover physiological disorders like scald, skin spots or internal browning are reduced.

Organic Elstar

In the present project the apple variety Elstar grown organically was harvested in October and stored from November to April under DCA (from 2% O_2 to 0.45% O_2, 2% CO_2 and rest as N_2), or under CA at a steady oxygen content (2%) and compared to storage under ambient oxygen (20%). The temperature in all treatments was +1 °C (±0.3). The oxygen level in DCA was lowered slowly from 2% O_2 to the anaerobic compensation point monitored by chlorophyll fluorescence and then raised just above the point to 0.45% O_2. The chlorophyll fluorescence was monitored on-line and measurements taken every 15 minutes.

During the storage period samples of apples were taken four times for measurements of ethylene (incubation in glass for 4 hours) and quality control (firmness, acid, sugar) before and after shelf life of 14-days (16°C, 97 % RH). Shelf life quality determined as firmness and absence of fungi blotch is a very important parameter, as the consumers will expect high quality from organic apples bought at a higher price than conventional.

Ethylene development

The dynamic atmosphere reduced the respiration from the apples compared to

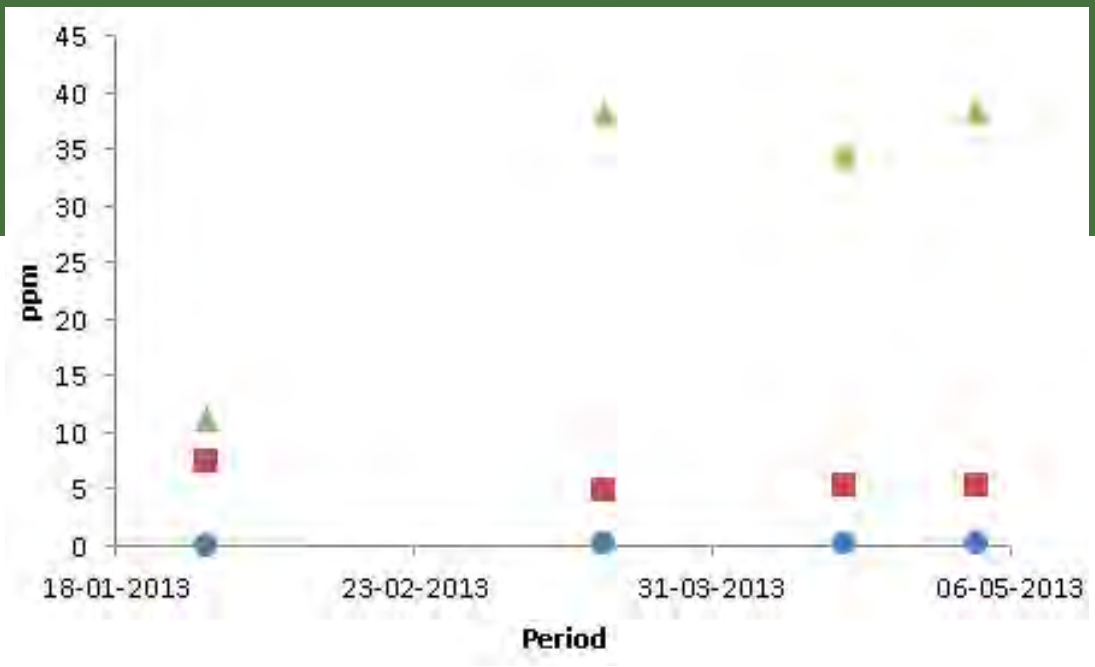


Figure 1 Ethylene development (ppm) from apples, Elstar, stored at DCA (●), CA (◎) and ambient oxygen (◎) in relation to storage time and conditions. (Ethylene determined from samples of apples after four hours at 16°C at ambient oxygen). There are significant differences between the treatments at all sampling dates.

CA and control. The ethylene measurements showed that the DCA method could reduce ethylene from the apples to very low levels compared to CA and control, Fig. 1. An even low level of ethylene will increase the ripening of the apples during storage decreasing the quality of the apples especially the firmness of the apples.

Firmness and shelf life

Firmness after storage was significantly higher at DCA and CA compared to control at the first sampling in late January (Table 1). A firmness higher than 5 kg/cm2 is required from retailers as quality parameter in Elstar apples. However, after shelf life the firmness decreased more rapidly in DCA compared to CA. In March the firmness was still high at DCA after storage, but decreased after shelf life and was not significant to control and CA. The firmness decreased further in April and May revealing that long time storage of the apples is not possible without losing quality. The storage rot was very low in all treatments even after shelf life.

In May physiological disorders were observed in DCA. Probably the apples were more sensitive to low temperature at the storage later on, when kept at very low oxygen.

The firmness of the apples in all treatments was lowered significant after shelf life period of 14 days revealing that the physiological conditions of the apples are changing very rapidly even after optimal storage conditions. The results show that it is possible to store apples under very low oxygen with good results concerning firmness for a rather long period until late March, but shelf life is reduced.

The physiological and biochemical responses during shelf life period should be given much more attention in future research in relation to preharvest effect during production and storage.

Table 1. Firmness (kg/cm²) of apples, Elstar, after storage at DCA, CA and ambient oxygen and after 14-days of shelf life at 16°C and 97% RH. Different letters within each date and storage time indicate significant difference between treatments.

	DCA (0.45% O_2)		CA (2% O_2)		Ambient oxygen (20%)	
	After storage	After shelf life	After storage	After shelf life	After storage	After shelf life
Storage - shelf life	kg/cm²					
29/1-12/2	5.638a	4.972b	5.575a	5.418a	4.83b	4.572c
18/3-3/4	5.589a	3.894ns	5.207b	3.817ns	4.46c	3.761ns
16/4-30/4	5.088a	3.643b	5.089a	3.957a	4.403b	3.675b

More information

Read more about the Organic RDD project FruitGrowth at: http://www.icrofs.org/Pages/Research/organicrdd_fruitgrowth.html

Organic RDD is financed by the Ministry of Food, Agriculture and Fisheries and coordinated by ICROFS.

The common house fly removes undesirable bacterium in manure

By Steen Nordentoft, National Food Institute, Technical University of Denmark

The common house fly (Musca domestica) is ubiquitous from the Polar Regions to the tropics. Although the larval stages of the fly takes place in decaying organic matter or manure from animals and humans, new research suggests that the conversion of the manure by the larvae is an important way of eliminating undesired bacteria such as Campylobacter jejuni.

Fly larvae

One of the major reasons for the great success of Musca domestica in all regions of the world is that the larval stages undergoes in decaying organic matter or feces of animals and humans; materials which are found everywhere in the world. The adult fly deposits her eggs on the surface, and hatched larvae undergo three larval stages during a week ending up as pupae.

Larvae transform manure into compost

In the pupae, the larva undergoes transformation to the adult fly. Depending on the temperature, but usually within a week, the fly breaks out of the shell ready to start a new life cycle. During the stay in manure the larvae initiate a fast aerobic turnover generating high temperatures, during which manure is converted into compost. The many nutrients which are released during the composting process are absorbed by the small larvae which increase their weight over a hundred times.

A natural protein source

Besides being able to convert organic material, fly larvae is also an important and nutrient-rich source of food for many wild animals. In the Organic RDD project BioConval we examine the potential use of fly larvae as live feed for organic laying hens. This is done primarily to serve as a valuable organic protein source, but it may also stimulate natural foraging behavior in the flock.

Significant reduction of pathogens in manure

The close relationship between Musca domestica and feces from animals and humans is also one of the reasons why, many studies have shown that the fly may carry a variety of pathogenic infectious agents between humans and animals. Whether this transfer happens due to larvae being reared in manure, or the adult fly is infected subsequently, is not well described.

Fly eggs in manure

To clarify this, we conducted experiments with the addition of pathogenic bacteria to poultry manure and fly larvae. When fresh manure was mixed with C. jejuni and fly larvae, the larvae quickly reduced the amount of the bacterium to a very low level within 3 days. On the fourth day it was no longer possible to detect C. jejuni in the manure. The same reduction was not observed in control samples without fly larvae. In subsequent studies of pupae and adult flies from the experiments, they also turned out negative for the C. jejuni, despite the fact that there were still many other bacterial species present in the manure or in the larvae gut.

Testing under practical conditions

The selected test bacterium in our experiments (C. jejuni) is mainly a zoonotic bacteria seldom causing disease in poultry. However, the laboratory tests showed clearly that larvae grown under optimal conditions, where the humidity is controlled during larval composting can break down this bacterium. This breakdown of bacteria seems to be selective as manure, larvae and pupae still contain many other bacteria which are not degraded by the larvae. Which groups of bacteria that is degraded remains to be clarified.

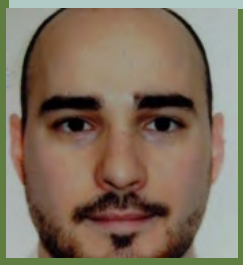
We are now testing whether it is possible to transfer the conditions for rearing larvae in the laboratory to the practice in real life. A prototype for growing larvae is developed at Danish Technological Institute, and this is currently being tested under practical conditions at an organic egg producer.

More information

Read more about the Organic RDD project BioConval at: http://www.icrofs.org/Pages/Research/organi-crdd_bioconval.html

Organic RDD is financed by the Ministry of Food, Agriculture and Fisheries and coordinated by ICROFS.

Report: Organic Policy Summit 2013 in Budapest and the 4th International Conference on Organic Agriculture Sciences in Eger, Hungary



By Szabolcs Elek, University of Hohenheim (De) and Aarhus University (Dk)

The Organic Policy Summit 2013 was held in Budapest on the 9th of October, to provide a platform for organic stakeholders and policy makers for open discussions.
The 4th International Conference on Organic Agriculture Sciences was held in the city of Eger, Hungary, where researchers, scientist and representatives of the organic sector gathered to discuss the latest issues and research done in organic agriculture. 120 people attended the conference.

The historical Parliament building in Budapest

The Organc Policy Summit was held in the historical Parliament building in Budapest on the 9th of October, It was opened by Sándor Lezsák, Vice-president of the Parliament, who mentioned the life work of Dr. Péter Sárközy, one of the founders of Biokultúra Egyesület, who during his life was an advocate of ecological agriculture and rural development.

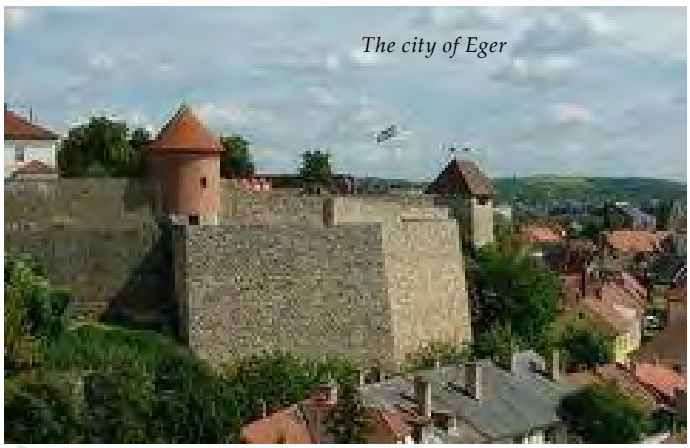
Prof. Urs Niggli from the Swiss Research Institute of Organic Agriculture (FiBL) presented the latest issues on organic agriculture: fertile soils, resilience, diversification, food security, rural development, consumption, sufficiency and maintaining resources for future generations. He remarked the statement of Prof. Pablo A. Tittonel, from Wageningen University, that "conventional agriculture cannot feed the world, but ecological intensification is the viable way of the future". New solutions have to be researched and implemented; some could be the integration of precision farming and technological innovations into organic farming and agroforestry.

Marco Schlüter the Director of the European Division of IFOAM presented the latest issues in rural policy in the EU. It was mentioned that 60% of ecosystems are degraded around Europe, that is the reason why a paradigm shift in agriculture is necessary. With diminishing oil reserves, and other complex environmental problems/issues, organic agriculture has to be part of the solution.

Lukáš Víšek from the European Commission on Agriculture and Rural Development then announced the European Innovation Partnership (EIP) in Agriculture Productivity and Sustainability, a new instrument for fostering sustainable agriculture development. Dr. Dóra Drexler the organizer of the event and managing director of the Hungarian Research Institute of Organic Agriculture (ÖMKI) explained the current situation of organic agriculture and research in Hungary. Hungary is still lacking behind in the conversion to organic agriculture, oriented research and well informed advisory service are needed to promote the sector and catch up with the European trends.

ICOAS Conference

The 4th International Conference on Organic Agriculture Sciences was held in the city of Eger, where researchers, scientist and representatives of the organic sector gathered to discuss the latest issues and research done in organic agriculture. 120 people attended the conference. These participants came



The city of Eger

from all around the world from universities, research institutes, NGO-s and market stakeholders. The Hungarian research institute ÖMKI with the help of the Czech Technology Platform of Organic Agriculture (CTPOA) organized this conference with the themes of Global Sustainability, Food Security, Biodiversity and Climate Change. During the conference the presentations and forums were divided into Sessions A to C, offering a wide range of topics in organic agriculture studies and current research projects.

In Session "A" the focus was on Perceptions of Organic Farmers, Novel Technologies in Organic Agriculture, and On Farm Research, Binding Practice and Scientific Inquiry. Session "B" hosted presentations in Organic Animal Husbandry, Organic Plant Breeding and Propagation, Sustainable Food Supply Chains, and Farmer Education. Session "C" was centered on topics of Practice Oriented Research, Avoiding Hazards, Organic Quality Control and Food Safety, and Sustainability Assessment for Improving Agricultural Practice.

I have to highlight the excellent job of the organizers and the enjoyable social programs. The second day the conference ended with a wonderful Gala Dinner with traditional Hungarian live music, excellent food and wine. Tamás Adorján from the award winning organic vineyard Gajdos Pincészet presented some of his Eger wine varieties.

A tour to the Tokaj region

During the 3rd day a tour was organized to the famous Tokaj region, visiting on farm research sites and wine cellars. The Tokaj landscape is a UNESCO World Heritage area, because of its historic and unique wine region. During the excursion we visited the biodynamic Pendits Winery, where Ádám Donkó researcher at ÖMKI explained their research on multi-species cover crop trial in vineyards. The second winery where we visited some of these trials was the Tokaj-Oremus, where they don't produce organic wine, but their company is researching and evaluating organic methods for possible conversion. The Tokaj wine is truly an unique wine and is called the Wine for Kings or King of Wines.

The conference showed that there is huge potential in cooperation and coordination of organic research in Central Eastern Europe.

Read the full report here: http://www.icrofs.org/pdf/ICOAS%202013_final.pdf

Some links for the conference

http://icoas2013.org/
Book of Abstracts:
http://icoas2013.org/wp-content/uploads/2013/10/ICOAS_Book_of_Abstracts.pdf

Reports
http://icoas2013.org/wp-content/uploads/2013/01/Hungarian-Organic-Policy-Summit-Report.pdf
http://icoas2013.org/wp-content/uploads/2013/01/ICOAS-2013-Report.pdf

OrgEprints
http://orgprints.org/20541/
http://orgprints.org/20537/
http://orgprints.org/20485/
http://orgprints.org/24492/

All presentation material and research results will be available soon on OrgEprints and ICOAS webpage.

References

Tittoneel, P. A. (2013) Farming Systems Ecology. Towards ecological intensification of world agriculture. Inaugural lecture upon taking the position of Chair in Farming Systems Ecology at Wageningen University on 16 May 2013. Wageningen University, ISBN 978-94-6173-617-8, 40 pages

Publications

SOLID News no. 4, 2013

Read articles and other news from the SOLID project in the newsletters "SOLID News". SOLID is a European project on Sustainable Organic and Low Input Dairying. Read more about SOLID at www.solidairy.eu

Newsletter from CORE Organic

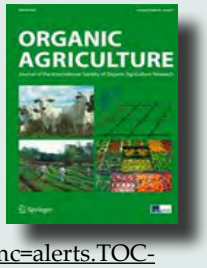
In this issue you canread about: -Prioritising the research areas in Core Organic -Improving the phosphorus efficiency of organic farming systems -ProPIG - Organic pig farmers and researchers working in eight European countries on animal health, welfare and nutrition to reduce environmental impact. Get the newsletter at: http://www.icrofs.org/pdf/2013_oct_coreOrganicnews.pdf

ISOFAR newsletter no. 17

The next ISOFAR Newsletter is available at: http://www.isofar.org/publications/newsletter/documents/isofar-newsletter-17.pdf

Organic Agriculture from Springer

New issue of Organic Agriculture from Springer now available online: http://link.springer.com/journal/13165/3/2?wt_mc=alerts.TOC-journals



Conferences

European Agriculture and Consumer Policy Conference

EU Seed policy and legislation Challenges: ''Who will own the seeds?" European Agriculture and Consumer Policy Conference, 22nd January 2014 in Brussels. Demeter International and more arranges a conference on the challenges in policy, ownership and legislation regarding seeds.

Read more at: http://www.icrofs.org/pdf/Preliminary%20Program_Demeter_Seed%20Conference_%2022_1_2014.pdf

Organic World Congress, held in Istanbul, Turkey, 13 - 15 October 2014

The congress is gathering the global Organic Movement every three years. 2000 people from all continents debate issues, inspire each other, learn altogether and take strategic decisions. The 2014 conference will have 3 themed tracks, The Main Track, The Scientific Track, and The Practitioners' Track as well as a series of Workshops. Read more at: http://www.owc2014.org/

New projects

Liquid organic fertilisers

Scientists from Aarhus University are leading a new research project where part of the solid manure will be replaced by liquid organic fertilisers. The project will design solutions with readily available nutrients in different concentrations and proportions for amore optimal nutrient supply to plants. Read more at: http://dca.au.dk/en/current-news/news/show/artikel/goedevanding-skal-styrke-dyrkningen-af-oekologisk-frugt-og-groentsager/

Stevia in organic food

A new research project led by scientists from Aarhus University and with collaboration from several industrial partners aims at developing a stevia product for use as a sweetener in organic food. The project runs from 2013 to 2017. During this period, the parties are intending, among other things, to develop a technique for a bio-friendly extraction of steviol glycoside from the stevia plant and purification of plant leaves, which will use membrane filtration rather than ion exchange. Read more at: http://dca.au.dk/en/current-news/news/show/artikel/stevia-planten-goeres-klar-som-soedemiddel-til-oekologiske-foedevareprodukter/