Archived at http://orgprints.org/15440

CORE Organic

iPOPY

CORE Organic Project Series Report

Proceedings

Providing organic school food for youths in Europe – Policy strategies, certification and supply chain management in Denmark, Finland, Italy and Norway

Proceedings of the iPOPY seminar held at the BioFach February 20th 2009 in Nuremberg, Germany

Benjamin Nölting, Berlin Institute of Technology (Editor)

CORE Organic project no. 1881

February, 2009

The author(s)/editor gratefully acknowledge the financial support for this report provided by the members of the CORE Organic Funding Body Network, being former partners of the FP6 ERA-NET project, CORE Organic (Coordination of European Transnational Research in Organic Food and Farming, EU FP6 Project no. 011716), which was finalised in September 2007.

The text in this report is the sole responsibility of the author(s)/editor and does not necessarily reflect the views of the national funding bodies having financed this project.

This project is one of the eight research pilot projects selected in 2007 for transnational funding by the partners of the CORE Organic ERA-net project. The pilot projects, which are running in the period 2007 – 2010, are:

AGTEC-Org AGronomical and TEChnological methods to improve ORGanic wheat quality: agtec.coreportal.org
ANIPLAN Minimising medicine use in organic dairy herds through animal health and welfare planning: aniplan.coreportal.org
FCP Farmer consumer partnerships: fcp.coreportal.org
COREPIG Prevention of selected diseases and parasites inorganic pig herds – by means of a HACCP based management and surveillance programme: corepig.coreportal.org
iPOPY innovative Public Organic food Procurement for Youth: ipopy.coreportal.org
PathOrganic Risk and Recommendations Regarding Human Pathogens in Organic Production Chains: pathorganic.coreportal.org
PHYTOMILK Potential improvement of the salutary effect of organic dairy milk by forage species and by supplementation: phytomilk.coreportal.org
QACCP Quality analysis of critical control points within the whole food chain and their impact on food quality, safety and health: qaccp.coreportal.org

For further information see: www.coreorganic.org

Benjamin Nölting; Center for Technology and Society at the Berlin Institute of Technology, Germany, noelting[a]ztg.tu-berlin.de

2009, International Centre for Research in Organic Food Systems (ICROFS), P.O. Box 50, Blichers Allé 20, DK-8830 Tjele, Denmark, Phone: +45 89 99 16 75, Fax: +45 89 99 16 73.
E-mail: icrofs[a]icrofs.org

Cover photos: Benjamin Nölting, Giacomo Sala, Kirsty McKinnon
Layout: Silke Reimann

A pdf can be downloaded free of charge from the Organic Eprints archive at www.orgprints.org.

ISBN: 978-87-92499-00-4

Index

Introduction: The supply side of organic school meals 6
Benjamin Nölting

State of the art of the project "innovative Public Organic food Procurement for Youth" (iPOPY) 9
Anne-Kristin Løes and Benjamin Nölting

Ecological modernisation in the public catering sector - Danish experiences with use of organic food 14
Thorkild Nielsen, Niels Heine Kristensen, Bent E. Mikkelsen

Organic Certification in the iPOPY Countries and Germany – Current Status and Future Challenges 18
Carola Strassner, Rainer Roehl

Organising supply chains of organic products for Italian school meals – The case of the province and of the city of Piacenza 23
Stefano Bocchi, Roberto Spigarolo, Marco Valerio Sarti, Benjamin Nölting

Introduction: The supply side of organic school meals

Benjamin Nölting

Center for Technology and Society of the Berlin Institute of Technology, Germany. noelting@ztg.tu-berlin.de

Healthy nutrition for children and youths is a hot topic in public debates around Europe. Public food procurement for youth can play a crucial role, and some public authorities have acknowledged their responsibility to provide sustainable nutrition. Sustainable nutrition can be defined as environmentally friendly, healthy, satisfying nutritional needs and contributing to life quality. Within a sustainable nutrition concept, food supply should correspond with daily life routines and foster socio-cultural diversity (Eberle et al. 2006, p. 54). According to Spigarolo and Donegani, sustainable food for young people should be safe, tasty, nourishing, produced respecting the environment, produced respecting ethical principles (social fairness, animal well-being...), and rewarding (meeting the psychological and social needs of the consumer) (Spigarolo/Donegani 2009). Organic food is an important means to contribute to these goals, and public organic food procurement for youth (POPY) is a strategy for public authorities to meet their responsibility.

The main channels of public food provision for youth are meal systems for day care institutions and schools. However, providing a sustainable school meal service is a challenging task. As Morgan and Sonnino state: "The most important vehicle for securing a sustainable school meals service is creative procurement policy, which takes a holistic view of the food chain because it recognizes that production and consumption need to be calibrated at the local level" (2007, p. 19).

POPY is a complex phenomenon, comprising a multitude of aspects, including regulatory frameworks; policies; decision-making processes at European, national, regional and local levels; supply chain management; certification procedures and standards; perceptions, preferences, and practices of young users; learning processes; food and health policies of schools and other food-serving outlets as well as the potential of organic food to reduce health risks. For this reason, the research project "Innovative Public Organic Food Procurement for Youth" (iPOPY) adopts a multi-perspective view on POPY, including interdisciplinary research and cross-country comparisons.

Strategies, structures, and practices for POPY vary considerably across the analyzed countries of Italy, Finland, Denmark, and Norway, all having specific traditions and development paths. Two main types of school meal systems can be differentiated. On the one hand, cooked school meals are served to a vast majority of pupils in Italy and Finland. The warm lunch system requires that school meals, lunchtime, facilities for eating etc. be integrated into daily school routines. The municipalities take the responsibility for such school meal systems. On the other hand, single food items such as school milk and fruit are offered to the children in addition to, or instead of a packed lunch brought from home in Denmark and Norway. There, the infrastructure for school meals is generally lacking, both physically (kitchens, dining halls) and socially (personnel to administrate, prepare and serve the food and do the cleaning) (Nölting/ Strassner et al. 2009).

These POPY constellations cover the whole food chain (Nölting/ Løes et al. 2009). At its one end are producers, at the other end final consumers. In between, there are many steps that food may travel between farms and the young user's plate, and many actors have their say in POPY. The food chain forms a production-consumption system which is characterized by material, economic and symbolic flows between the two indicated poles. These flows move downstream from production to consumption and vice versa from consumption to production. Materials, information, value etc. are or might be transformed at each step in both directions (Princen et al. 2002; Lebel 2005).

Results from the iPOPY project from the users' perspective were presented at the seminar "Like what you get? Is it good for you?" held at the University of Helsinki, Finland, 21-22 January 2009. This seminar and the related proceedings at hand focus on the supply side of POPY. The supply chain is defined as the part of the food chain that goes from the farmer to the kitchen or the processing unit.

The challenges of organizing an efficient supply are manifold and can be characterized by the following aspects:

1 Generally, out of home catering is a complex task, because kitchens and caterers have to balance supply and demand within very tight organizational, logistical, time and budget limits. Changing

these structures and routines is very difficult, because many parts of the supply chain are immediately concerned. The relationships between chain actors are crucial for the quality and sustainability of school meal services (Mikkola 2008, Morgan/Sonnino 2008, Rückert-John 2007).

2 The economic conditions for the procurement of school meals cannot be described properly by an open, atomistic market model which focuses on the equilibrium between many suppliers and many consumers. On the contrary, it is a highly regulated field with many institutional actors involved, whereas the role of the final users – the pupils – is rather fuzzy. We could describe this situation as a "politicized market", because regulation, administration, public procurement departments, nutritionists, education, parents etc. follow diverse rationalities beyond cost-benefit-strategies (Biermann 2007). As it is concerned with food for children and their health, moral economy (Morgan et al. 2006) and educational values play an important role (Mikkola et al. 2009).

Introducing or increasing the use of organic food is an additional challenge which has to consider all these restrictions when designing public food procurement for youth. In our seminar, some results of iPOPY are presented and key points for the supply side of POPY are discussed.

First of all, Anne-Kristin Løes and Benjamin Nölting give an *overview of the iPOPY project* and its first results. This outline of the holistic research approach helps locate the challenges of the supply side of POPY, some crucial aspects of which are analyzed in the following papers.

Political strategies are highly relevant for changing the "politicized market" of public food procurement. Thorkild Nielsen, Niels Heine Kristensen and Bent Egbert Mikkelsen reflect on whether and how organic food in schools and kindergartens can be described as a part of an ecological modernization strategy in Denmark. They discuss how it has merged with more economically and technically approach in public catering policy.

Organic production has to be certified and labeled along the supply chain in order to maintain trust in organic premium products. Since January 1st 2009, *organic certification* in Europe is subject to the new Council Regulation (EC) No 834/2007 of 28 June 2007. This regulation specifically excludes so-called mass catering operations. It is up to EU member states to apply national rules or private standards insofar as these comply with community law. The paper of Carola Strassner presents the state of the art and upcoming changes of organic certification of out-of-home catering in Germany with regard to Norway, Finland, Denmark, and Italy.

Last but not least, *supply chains of organic school food* have to be organised in a sustainable way in order to serve high quality food to pupils. Stefano Bocchi, Roberto Spigarolo, Marco Valerio Sarti, and Benjamin Nölting present a best practice case of controlled food chains (*filiera controllata*) from Italy, the European champion of organic school food. From the province and the city of Piacenza in the region of Emilia-Romagna, we can learn a lot about a short and certified organic food-chain, a wide range of regional and organic products provided through a shared logistic organisation among local partners, and specific tender procedures.

These proceedings present some first results with regard to the organic school food supply chain, halfway through the iPOPY project. They indicate possible solutions and challenges for sustainable public food procurement for youth. These options for action, however, need to be matched with the requirements and possibilities of the users' side.

References

Biermann, B. (2007): Nachhaltige Ernährung. Netzwerk-Politik auf dem Weg zu nachhaltiger Gemeinschaftsverpflegung. München: oekom Verlag.

Eberle, U./ Hayn, D./ Rehaag, R. and Simshäuser, U. [Eds.] (2006): Ernährungswende - Eine Herausforderung für Politik, Unternehmen und Gesellschaft. München: oekom Verlag.

Lebel, L. (2005): Transitions to sustainability in production-consumption systems. Journal of Industrial Ecolocy 9 (1/2), p. 11-13.

Mikkola, M. (2008a): Coordinative structures and development of food supply chains. British Food Journal 110 (2/2008), p. 189-205.

Mikkola, M./ Mikkelsen, B. E. and Roos, G. [Eds.] (2009): Like what you get? Is it good for you? Proceedings of the seminar held at University of Helsinki, Ruralia Institute 21.-22. January 2009, Helsinki, Finland. Tjele, DK: International Centre for Research in Organic Food Systems (ICROFS) (CORE Organic Project Series Report).

Morgan, K./ Marsden, T. and Murdoch, J. (2006): Worlds of Food: Place, Power, and Provenance in the Food Chain. Oxford: Oxford University Press.

Morgan, K. and Sonnino, R. (2007): Empowering consumers: the creative procurement of school meals in Italy and the UK. International Journal of Consumer Studies 31, p. 19-25.

Morgan, K. and Sonnino, R. (2008): The school food revolution. Public food and the challenge of sustainable development. London: earthscan.

Nölting, B./ Løes, A.-K. and Strassner, C. (2009): Constellations of public organic food procurement for youth. An interdisciplinary analytical tool. Tingvoll: Bioforsk Organic Food and Farming Division (Bioforsk Report Vol. 4 No. 7 2009; iPOPY discussion paper).

Nölting, B./ Strassner, C./ Løes, A.-K. and Nielsen, T. (2009): Bio-Schulverpflegung in Italien, Finnland, Dänemark und Norwegen - Was kann Deutschland lernen? (Wissenschaftstagung Ökolandbau Zürich 2009).

Princen, T./Maniates, M. and Conca, K. [Eds.] (2002): Confronting consumption. Cambridge: MIT Press.

Rückert-John, J. (2007): Natürlich Essen. Kantinen und Restaurants auf dem Weg zu nachhaltiger Ernährung. Frankfurt/New York: Campus.

Spigarolo, R. and Donegani, G. (2009): Practice of organic food in Italian schools. In: Mikkola, M./ Mikkelsen, B. E. and Roos, G. [Eds.]: Like what you get? Is it good for you? Proceedings of the seminar held at University of Helsinki, Ruralia Institute 21.-22. January 2009, Helsinki, Finland. . Tjele, DK: International Centre for Research in Organic Food Systems (ICROFS) (CORE Organic Project Series Report), p. 27-33.

State of the art of the project "innovative Public Organic food Procurement for Youth" (iPOPY)

Anne-Kristin Løes[1)] and Benjamin Nölting[2)]

[1)]Bioforsk Organic Food and Farming, N-6630 Tingvoll, Norway. anne-kristin.loes@bioforsk.no
[2)]Center for Technology and Society of the Berlin Institute of Technology, Germany. noelting@ztg.tu-berlin.de

1. Why organic food for the youth?

Rising obesity rates among European children cause concern, for example within the European Commission (2003). In spite of the excess access to food, malnutrition and diseases related to food intolerance are also common, and call for new food serving approaches in public as well as in private settings. Hence, schools are increasingly becoming a "food arena" for public engagement, recently demonstrated by the EU decision to implement a daily free fruit school program (European Commission 2008). The European Commission has allotted funding for a School Fruit Scheme which will begin in the 2009/2010 school year, jointly funded by the EU and by participating national governments. The program is aimed at improving the health of young people in Europe, hoping that increased fruit and vegetable consumption patterns will continue into their adult lives. Although a number of countries rely on the family to provide pupils' food during school hours, publicly organized meal systems and fruit provision strategies are growing in Europe; this is partly due to longer school days and to assist busy families, but also due to public nutrition and sustainability strategies. Public food serving is utilized to achieve healthier eating and more sustainable consumption patterns, as shown by the strategy to accompany the mentioned school fruit scheme with "awareness-raising and educational measures" (European Commission 2008).

Another important option for sustainable school food is to serve organic products. Organic agriculture has less negative impacts on the environment, for example due to reduced loads of pesticides, and organic produce may have a higher quality (e.g. Brandt/ Mølgaard 2001). Hence, and due to the rapidly increasing consumers' demand, European countries promote organic food and farming, e.g. with a European action plan (Commission of the European Communities, 2004). Organic school meal programs provide an opportunity to increase the quality of the school food and hence the health and well-being of the pupils, to increase organic consumption, and to inform pupils about sustainable food patterns. The introduction of organic food in catering often implies that more focus is set on healthy eating (Mikkelsen et al. 2006; O'Doherty Jensen et al. 2001) because organic food strategies are usually guided by a committed food and nutrition policy. Further, organic food strategies often include "less meat, more vegetables" as a result of premium prices which are normally much higher for organic meat than for vegetables and cereal products. Such adaptations are often nutritionally sound.

However, public procurement for sustainable nutrition and the use of organic food is still an untapped potential, as Morgan and Sonnino state (2008). Even though numerous committed activists strive for high quality, organic school food this field has only started to develop most of the European states. A co-ordinated and well informed effort is needed to overcome enduring restrictions. But it is worthwhile, and the chances for society are huge because the youth of today are the future family parents. When they get introduced to organic food and farming in public settings like school education, it is more likely that they will buy organic food when they grow up.

2. iPOPY – a CORE Organic pilot project

The transnational research project "innovative Public Organic food Procurement for Youth" (iPOPY) was initiated in late 2006, when 11 European countries cooperated in the ERA (European Research Area) net CORE Organic to launch a joint call for research projects. The headlines of the CORE Organic call were animal health and welfare, food quality and market research, and iPOPY is one of two market research projects.

The main goal of iPOPY is to study how increased consumption of organic food may be achieved by the implementation of strategies and instruments used for public procurement of organic food in serving outlets for young people. Supply chain management, procedures for certification of serving outlets, stakeholders' perceptions and participation as well as the potential of organic food in relation to health and obesity risks are analysed. Our project period lasts for 3 years (2007-10), and the funding comprises 1.4 mill €.

3. Project approach and structure

The research approach in iPOPY is a combination of qualitative and quantitative methods. Information is collected by structured and open-ended questionnaires and interviews. Statistics from public websites and reports are another important source of information. We have defined three to five relevant cases per country where drivers, hindrances and factors promoting organic food serving are being studied. Most of these cases are municipalities with an ambitious aim of public organic food consumption, but we have also included a Finnish congregation, Norwegian military camps and a music festival.

iPOPY consists of five work packages (WPs), studying policies (WP2), supply chains and certification (WP3), the young consumers' perception and participation (WP4), and health effects of organic menus (WP5). One WP (WP1) takes care of project management and draws the final project conclusions based on results and conclusions from all WPs. Further information is found on our web site, www.ipopy.coreportal.org.

To facilitate the discussions in our research team, we have agreed on the following working definition of the key terms in the project title:

"Public organic food procurement for youth comprises all activities with regard to procurement in public food services for children and young people up to 25 years in schools and other public institutions for youth, such as day-care centers, universities, hospitals, and military facilities. The meal system is organized and its costs are carried, at least partially, by the public institution in question. Youth, or their parents, may need to pay for the food, at least in part. The food contains organic products conforming to EU-Regulations on organic production". Nölting et al. 2009a, p. 13.

iPOPY has attracted the interest of several talented students, who have used research questions related to the project to conduct studies and partly to produce theses to achieve an academic degree. The students have been active in the research team, and so far four theses have been published (Hansen et al. 2009, Marley 2008, He 2008, Sørum 2008).

4. School meals - served and studied

The main focus in the iPOPY project is on organic food served in schools, because schools are the most important common setting for young people in all of the participating countries. Finland and Italy both have a long tradition for serving warm school meals to their pupils. Italy is a pioneer in Europe to use organic and local products in school meals, whereas in Finland, both economy and lack of interest restrict the use of organic products in school meals. In Denmark and Norway, children bring a packed lunch and subscribe to milk and fruit served at school. This pattern is slowly changing, and publicly organised food provision is increasing, especially in Denmark. Some Danish municipalities have developed large organic school meal programs (see section 1.4). Norway was the first European country to introduce a daily free school fruit scheme in public schools. Good arguments for this decision were found in an intervention study documenting a long-lasting increase in daily intake of fruit and vegetables after pupils had had a period of free fruit serving at school (Bere et al. 2007). The school meal systems in the four iPOPY-countries and Germany are further discussed by Noelting et al. (2009b).

The organisation of school meals, and the extent to which organic products are integrated in these meals, were the topics of the first four reports from the iPOPY project (Bocchi et al. 2008, Hansen et al. 2008, Løes et al. 2008, Mikkola 2008). iPOPY has also arranged open workshops to discuss these topics during the Biofach fair in Germany 2008 (presentations available at www.ipopy.coreportal.org) and the 16th Organic World Congress in Modena, Italy in 2008 (Strassner et al. 2009). In January 2009, an open seminar focussing on iPOPY WPs 4 and 5 was arranged by Ruralia Institute at the University of Helsinki and attracted 34 participants from six European countries (Mikkola et al. 2009).

5. Project half way – some important results

iPOPY has reached its half-way point. Several interesting studies have been conducted, and many more are under way. Doing research in a field where political initiatives and practical experiences are changing very rapidly is a challenge, but also increases the practical impact of the studies we perform. Altogether, the case descriptions, workshop and seminar proceedings and scientific papers from the iPOPY project comprise a valuable documentation of current public food procurement systems aimed at young people in Europe. Studying and working with youth is inspiring, and contributes to the dedication and creativity of the research team.

5.1 Italian caterers think organic is expensive

In spring 2008, an extensive survey was made to collect opinions and information about main constraints related to the supply of organic foods in school canteens in Italy. 50 producers of organic foods and 50 caterers of food service for children were filling in a questionnaire, and some stakeholders were also interviewed. The main constraints for the implementation of organic products in public school procurement were economy and logistics, but the caterers also emphasize the distribution. More than 70 % of the producers think that the municipalities and the catering companies do not pay a fair price for organic products. Producers estimate that the extra costs of organic food as compared to conventional are 20 – 30 %, while the caterers estimate a premium price of 30 – 40 %. Caterers complain that organic products (especially fruit and vegetables) are not always available. About certification, the producers would prefer to certify the catering and the ingredients, whereas the caterers would prefer to certify the meal and/or the ingredients (Bocchi/ Spigarolo 2009).

5.2 Danish schools serve organic, but pupils stick to the packed lunch

Denmark has no national regulations or funding for implementing meal provision systems. Even so, some municipalities have developed locally adapted school meal systems, often including organic food. The capital Copenhagen (52 primary schools), the city of Roskilde (19 schools) and the rural municipality of Gladsaxe (16 schools) have very different approaches, and were chosen for a study to examine various experiences (He et al., 2007). Key informants in each municipality were interviewed, focusing on barriers and future plans regarding an increased consumption of organic food in school meals. Copenhagen relies on a large centralized kitchen (KØSS) where meals are produced to be sold in a tuck shop at local schools by pupils organized by a trained teacher. In Roskilde, the meals come from a local organic catering company, and staff is hired to serve the food at the schools. Gladsaxe employs kitchen operators to prepare lunch at single schools, and a municipal coordinator is responsible for their education and supervision. In all municipalities, the amount of organic food consumed in schools has so far been well below the politically decided goals and ambitions. Although the organic share of the food supply has reached satisfactory levels in some cases, the total amount of food sold is low due to a limited number of users. On average, less than 25 % of the pupils buy the meals. The traditional lunchbox seem to have been shaping the eating style of school children for a very long time, and this habit is one of the barriers to increasing the application of organic school meals. Even if the organic school meals are not free for the pupils, a significant public financial support is needed for administration, infrastructure etc. Further, it is a challenge to develop an efficient and committed organization at the schools to be responsible for the meals. The schools themselves do not promote organic school meals, and some members of the school staff complain about getting extra work without sufficient resources. Further, no municipality makes any effort to promote their organic school meal programs to other municipalities, so it is difficult to use current experience to develop new and possibly more efficient systems.

iPOPY results show that the KØSS system in Copenhagen has not managed to create a significant ownership among the pupils, and has also failed to integrate the organic message into the school curriculum. The potential to support organic and healthy food supply system with curricular strategies is huge, and should be emphasized.

5.3 Norwegian pupils relate organics to health

In a M Ph thesis supported by iPOPY, Marley (2008) made a qualitative study of four Norwegian lower secondary schools where organic food is being introduced to the pupils, either through the common school fruit/school milk schemes or through the schools' own school food initiatives. It should be noted that such initiatives are only found in a few Norwegian schools. Norwegian pupils bring their own food to school, which usually offers fruit and milk subscription programs. In a few regions, organic fruit or milk is available. The study examined if and how organic food is being included in the schools' curricula, and whether organic food education is being linked with environmental education topics. Whereas teachers and school administrators supported organic food because of the environmental benefits, the pupils generally drew stronger links between organic food and health. While it was important to have an enthusiastic staff member advocating for organic food in order for the program to be initiated, it was also important to involve a broad range of school staff in the process to achieve a larger consciousness among the pupils. Involving the pupils in the organic school food process - through school or community gardens, cooking and baking school meals, school trips to farms and so forth was also quite essential in order to get them interested in organic food and agriculture.

5.4 Festival participants use food as body fuel

One of the Norwegian iPOPY cases is the annual Øya music festival in Oslo, which has served organic food since 2003. By focus group interviews after the event in 2008, young people's experiences with organic food were explored. It was clear that festival food is regarded as "body fuel", not gastronomy, and that it was crucial for the festival guests to get much food for the money. For young people in Norway, organic food is closely linked with premium price, and sometimes with low quality due to long shelf storage in the shops. The informants were not convinced that exposing organic food at the festival would necessarily impact people's preference for buying organic food later, because a festival is seen as a limited case, insulated from everyday life. It might even be negative for an increased everyday/at home-consumption of organic food if such products become closely associated with festivals, convenience food and eating out of home (Roos 2009).

6. Conclusion

The work in, and deliverables so far from the iPOPY project have demonstrated that each country has its own history and cultural background, explaining the huge differences in current school meal systems and use of organic products. Each country has its own path of development in this respect; however, it is beyond doubt that school meal systems will change with time everywhere due to the pressing health and environmental problems as well as changes in the education structure (longer school days). These changes provide the opportunity to introduce the ideas of organic food – expressed e. g. by the four basic principles of organic agriculture: health, ecology, fairness, and care from IFOAM – into public food procurement for children and youth. However, these ideas are not static and fix, they need to be evolved in and adapted to the specific and complex context of POPY. There is much to learn from the four countries both with respect to challenges and problems, and with respect to good ideas and creative solutions. By our transnational research and activities, iPOPY contributes to carry this knowledge across boundaries. We consider this work to be a small, but very meaningful contribution to point out public procurement strategies for sustainable nutrition which can foster a more sustainable world for all.

7. References

Bere, E./ Veierød, M.B./ Skare, Ø. and Klepp, K. I. (2007): Free school fruit – sustained effect three years later. International Journal of Behavioral Nutrition and Physical Activity Research 4(5), http://www.ijbnpa.org/content/4/1/5

Bocchi, S./ Spigarolo, R./ Marcomini N. and Sarti, V. (2008): Organic and conventional public food procurementfor youth in Italy. Bioforsk report 42, Tingvoll, Norway. http://orgprints.org/13347/

Brandt, K.and Mølgaard, J.P. (2001): Organic agriculture: does it enhance or reduce the nutritional value of plant foods? Journal of the Science of Food and Agriculture 81, p 924-931.

Commission of the European Communities (2004): European Action Plan for Organic Food and Farming. http://ec.europa.eu/agriculture/organic/eu-policy/action-plan_en

European Commission (2003): Europa- Public Health Programme. Web site visited January 2, 2009. http://ec.europa.eu/health/ph_projects/2003/action3/action3_2003_04_en.htm

European Commission (2008): School Fruit Scheme: Which role for the European Union? Web site visited January 2, 2009. http://ec.europa.eu/agriculture/markets/fruitveg/sfs/index_en.htm

Hansen S.R./ Schmidt H./ Nielsen T. and Kristensen N.H. (2008): Organic and conventional public food procurement for youth in Denmark. Bioforsk report 40, Tingvoll, Norway. http://orgprints.org/13349/

Hansen, M./ Laursen, R.P. and Mikkelsen, B.E. (2009): Design and pilot testing of a dietary assessment methodology for children. iPOPY report based on a Bachelor thesis at the National Food Institute, Technical University of Denmark, 2008. In press, will be made available at www.orgprints.org.

He, C./ Mikkelsen, B. E. and Løes, A.-K. (2007): Organic school meals in the three Danish municipalities. Report. http://orgprints.org/14061/

He, C. (2008): Does organic food intervention in school lead to change dietary patterns? Master thesis, Technical University of Denmark. http://orgprints.org/14573/

Løes A.-K./ Koesling M./ Roos, G./ Birkeland L. and Solemdal L. (2008): Organic and conventional public food procurement for youth in Norway. Bioforsk report 43, Tingvoll, Norway. http://orgprints.org/13346/

O'Doherty Jensen, K. et al. (2001): Økologiske fødevarer og menneskets sundhed. (Organic foods and human health). Rapport fra videnssyntese udført i regi af Forskningsinstituts for Human Ernæring, KVL, Forskningscenter for Økologisk Jordbrug, 132 p. http://www.foejo.dk/publikation/rapport/Rap_14.pdf . In Danish.

Marley, E.K. (2008): Food for Thought - Introducing Organic Food in Norwegian Schools. Master Thesis, Senter for Utvikling og Miljø/Centre for Development and the Environment, University of Oslo. http://orgprints.org/14573/

Mikkelsen, B.E./ Bruselius-Jensen/ M., Andersen/ J.S. and Lassen, A. (2006): Are green caterers more likely to serve healthy meals than non green caterers? Results from a quantitative study in Danish worksite catering. Public Health Nutrition 9(7), p. 846-50.

Mikkola M. (2008): Organic and conventional public food procurement for youth in Finland. Bioforsk report 41, Tingvoll, Norway. http://orgprints.org/13348/

Mikkola, M./ Mikkelsen, B.E. and Roos, G. (2009): Like what you get? Is it good for you?

Organic food, health and sustainable development in schools. Proceedings of the seminar held at university of Helsinki, Ruralia Institute 21.–22.1.2009, Helsinki, Finland. CORE Organic Series Report. http://orgprints.org/15275/

Morgan, Kevin and Sonnino, Roberta (2008): The School Food Revolution. Public food and the challenge of sustainable development. London: Earthscan.

Noelting, B./ Løes, A.-K. and Strassner, C. (2009a): Constellations of public organic food procurement for youth. An interdisciplinary analytical tool. Bioforsk report vol 4 No. 7, iPOPY discussion paper 1/2009. www.orgprints.org/15302/

Noelting, B./ Strassner/ C., Løes, A.-K and Nielsen, T. (2009b): Bio-Schulverpflegung in Italien, Finnland, Dänemark und Norwegen – Was kann Deutschland lernen? (Organic school food procurement in Italy, Finland, Denmark and Norway- which lesons can be learned for Germany?). Paper for the 10th scientific German congress about organic food and farming, Zürich, February 2009. In German, www.orgprints.org/14420/

Strassner, C./ Løes, A.-K./ Kristensen, N.H. and Spigarolo, R. [Eds.] (2009): Proceedings of the Workshop on Organic Public Catering at the 16th IFOAM Organic World Congress, 19th June 2008 in Modena, Italy. Core Organic Project Report Series, in press, will be made available at www.orgprints.org/15203/

Sørum, H. (2008): Økologisk mat i Forsvaret – soldatenes holdninger til økologisk mat og landbruk (Organic Food in the Norwegian Defence - the Soldiers' Attitudes to Organic Food and Agriculture). In Norwegian. Bachelor thesis, Akershus University College, 68 p. www.orgprints.org/15303/

Ecological modernisation in the public catering sector – Danish experiences with use of organic food

Thorkild Nielsen, Niels Heine Kristensen,[1)] Bent E. Mikkelsen[2)]

[1)]DTU Management, Innovation and Sustainability, Technical University of Denmark. t.nielsen@ipl.dtu.dk; nhk@ipl.dtu.dk
[2)]DTU Food, National Food 14Institute, Department of Nutrition, Technical University of Denmark. BEM@food.dtu.dk

1. Introduction

In this paper we use the concept of ecological modernisation as frame to understand the relationship between two parallel developments in the public catering sector, namely the *sustainability discourse* and the *rationalisation discourse*. We argue that the two tendencies are increasingly merging. The focus is on organisational changes in the public sector in a sustainable perspective. This paper was produced as a part of the iPOPY project, where work package 2 "Policy analysis" studies efficient strategies to increase public consumption of organic food especially in public procurement for youth.

Danish municipalities feed daily hundreds of thousands citizens at schools, kindergartens, elderly homes, hospitals etc. Even though the cost to this food service only account for a small share of the total cost of the institutions, huge efforts have been made to "slim" this area, especially up through the 1990s. A wave of consultancy reports based on the analysis of operations swept especially the larger institutional kitchens nationwide in that decade and reports in general recommended a common cure: to introduce large-scale operations and to reduce the number of kitchens, to cut the number of employees in order to enhance productivity, to implement new catering technologies with a longer shelf life in order to increase productivity and to increase the use of semi produced foods thereby lowering labour costs.

However, parallel to this dominating *rationalisation discourse* in the food service sector a number of signs have indicated an emerging "anti-wave". We call this anti-wave the "*sustainable discourse*". It is characterised by focusing on a wider notion of food and meal quality including aspects such as a wish to implement healthier nutrition, introduces higher food quality standards, building competence for employees, implement organic procurement schemes, introduce "gastronomic" initiatives, involve wider factors such as eating surroundings and environment – all factors that can be contained in the notion a democratisation of the food service area in which employees is given the opportunity to develop the quality of their working lives and at the same time to develop the quality of the service they are involved in.

We want to discuss whether the struggle between the two discourses that has been taking place over a decade in public food service has resulted in a trend that some theorists have coined *ecological modernisation*. Could it be argued that some of these initial intentions that wanted to change the food service sector into a more sustainable direction, have been mainstreamed and absorbed in the established food service regime where rationalisation and effectiveness are the main goals?

Our point of departure is that it is meaningful to speak about an actual environmental transformation or change in essential parts of the societal institutions and their mutual division of labour – a change from external environmental regime to internal environmental regime. Mol sees environmental considerations as a sphere which used to be marginalised, but slowly is being embedded in the economic institutions as an equal partner. They claim that the environment will restructure the economic processes with ecological criteria and goals, and that environmental considerations gradually will restructure the economic processes with ecological criteria and objectives (Mol 1995). This is what happened when the environmental regime shifts from external to internal, e.g. when the municipal decide to introduce organic foods in the municipal institutions.

Mol identifies four common characteristics for projects that are part of an ecological modernisation. *Firstly* ecological modernisation argues that modern science and technology are principal institutions in greening economy (Mol 1995). This is in contrast to the former "end-of-pipe" solutions[1]. *Secondly* ecological modernisation stresses the importance of the dynamics of the market, and the importance of market actors as drivers of ecological restructuring. *Thirdly* the role of state in the ecological modernisation is to guide and outline a direction of development. This is in contrast to the former role of the state as commanding and

[1] End-of-pipe solutions refer to arrangements that prevent the waste to be spread in the nature (e.g. filters), but don't intend to stop the production of waste, like *cleaner technologies*.

centralising. Some areas are left to the market e.g. certifications or formulated requirements to the suppliers. *Fourthly* the NGO's role is changing from opponents to co-players in establishing a new sustainable development and support from citizens. The NGO has resigned its initial role of criticizing the "project of industrialisation".

2. The sustainability discourse

With the Rio Declaration from 1992, many governments all over the world have committed themselves to work for sustainable development. The declaration emphasizes that both production and patterns of consumption have to change in order to achieve this goal. One of the most important areas, both socially and environmentally, is the manufacturing and consumption of food, and thus increased production and consumption of organic food represent important contributions to reduce the negative environmental impact of food production. Accordingly, a number of governments in Europe have created action plans and set up concrete goals for the conversion of conventionally grown agricultural land to organically grown (Znaor 2001). In a number of countries, strategies have also been generated for distributing and marketing of food originating from organic farms; these include, among other things, strategies for the reorientation of the public food consumption towards organic food (Laberenz/ Naatz 2000, Nielsen et al. 2002, Rech 2002).

Whereas the majority of the European organic conversion processes within public sector catering seems to get political support in order to improve public health or the marketing of rural agri-businesses, it is the protection of groundwater from the seepage of pesticides and nitrogen and other environmental aims that have been the point of departure in the Danish case. In order to raise the use of organic food in the food service sector the Danish government in 1997 decided to put aside € 5,000,000, and later a further € 1,500,000, towards the reorientation of organic products in the local municipal authorities titled "green procurement" (Hansen et al. 2008). In Denmark, the relatively small kindergartens and day nurseries have seriously embraced the challenge of implementing organic food. The difficulties with the process of organic conversion seem to be proportional to the size of the kitchen, but new projects indicate that even the large hospital kitchens can reach an organic percentage within the existing budgets (Hansen et al. 2008).

Through the 1980s a number of food service kitchens implemented organic food in their operations, even without public support. The driver for these initiatives was a wish to maintain a sustainable operation of food service and most of the institutions had a pedagogical, educational or social objective.

The use of organic food in many of these institutions became mainstream and the organic procurement policy was seen as an obvious way of taking their values and principles from policy into daily life by integrating the history and traceability of products into food service operations. In many cases local food supply initiatives were an integral part of alternative projects. Such projects were mostly bottom up approaches involving grassroots such as students, parents etc. as opposed to many top down projects that had only limited public appeal (Mikkelsen 2004, Nielsen et al. 2002).

The health and environmental issues that appear on the agenda in the 1990s were another important driver for the engagement that many food service professionals showed towards an organic conversion. Especially the fear of pesticide residues entering into water supply reservoirs was seen as a potential risk (Elle 2004).

Vejle and Copenhagen municipalities as well as Western Zealand County were examples of projects in which the initiative came from above. A characteristic of these projects was the very ambitious nature of the projects and the involvement of high-level bureaucrats and politicians. Many of these were a part of a strategic Agenda 21 policy in which organic procurement was seen as an important element (Kristensen/ Nielsen 2007). A characteristic was also that goals for the share of organic food were very ambitious ranging from 30 to over 80 percent. Fredericia municipality decided in 1994 that half of the public procurement should be organic at the end of the project (Hansen 1996).

The top down approaches initiated in the late nineties resulted in a boost of the organic procurement in food service because contrary to the small scale bottom up initiatives these top down projects had much more impact on the supply side. The latest Danish example of top down initiative is the "Healthy School meals in Copenhagen" (KØSS) program, which was initiated by the municipality of Copenhagen. The aim of the program is to allow school children to develop healthy eating habits; emphasising healthy and mainly organic food. By end of 2009 60 percent of all the food ingredients used by the Copenhagen institutions is intended to be organic, and the goal is 90 percent in 2015. The municipality finances the establishment of stalls or canteens in the schools, but the users have to finance the operation of the system (Hansen et al. 2008).

3. The rationalisation discourse

In general we have seen tendencies to incorporate a management philosophy to modernize the Danish Public Sector since the 1980s. These tendencies of public reforms have been called New Public Management (NPM). Taking the departure in public choice and managerial schools, NPM seeks to enhance the efficiency of the public sector and the control that government has over it. The idea of NPM is that a more market-orientated public sector could lead to higher cost-efficiency, without having negative side effects on other objectives and considerations. In the New Public Management citizens are typically regarded as customers, and the idea of applying more competition is seen an important way to boost the efficiency of the public sector.

One of the problems of New Public Management is the need for greater inspection and supervision due to less clarity, but also miscalculation of public opinion, which does not always seek for more efficiency but rather political solutions (Elle 2004).

Consultants rigorously carried out rationalisation projects during the 1990s, which were fuelled by a growing focus on the sector and its services. The idea of consultants riding the rationalisation wave was that through the appliance of evidence based and scientific approaches to food service management a better overall performance could be achieved through the use of more rational planning and better operational techniques. The appliance of these new "scientific" methods in almost all cases resulted in substantial workforce cuts. These cuts were very visible to the stakeholders in the sector because nearly half of the resources used for food service are labour costs. Thus the word quickly began to spread in municipalities and counties that consultants' analysis was a shortcut to substantial cost-cuts.

In the rationalisation approach the up scaling of food service operations were central (Kryger/Olsen 1987). Within the nursing sector, central production units were built to serve a number of smaller satellite nursing homes and home living elderly – a service known as meals on wheels. Most of these new scientific solutions were based on cook and chill technology in which large amounts of prepared meals could be held for up to 72 hours before serving (Warde/Martens 1998). This technology revolutionised the kitchens because for the first time production and serving could be separated in space as well as in time. Thus the traditional concept of production by which the meals were kept hot until consumed widely known as cook, hold and serve or simply cook serve became more and more problematic because of the competition from cook and chill and the increasing centralisation of production (Zinck 1995, Creed 2001).

At the same time food industry realised the potential hidden in developing convenience meals, meal elements and semi prepared meals for food service since the wish to cut labour costs were paramount (Mikkelsen et al. 2004). Because of the effects of specialisation and economies of scale, the caterers assumed control over still larger parts of food preparation, offering technologies and less kitchens (Creed 2001).

4. Results

According to the ecological modernisation we find that the early alternative projects up to the middle of the 1990s are different compared to the "new ecological projects" later on. We tried to identify the four factors Mol uses for the definition of ecological modernisation:

1) In the food service sector modern management theories and new technological solutions are seen as an important way to improve the environmental performance. Cleaner technology is one example of how technology and science are used to reduce waste and electricity in the kitchens. Several research and development projects were initiated. In the "new ecological projects" these more advanced environmental tools have been integrated in the projects. This has on one side broadened the projects with respect to other environmental impacts e.g. transport, but also limited the focus to elements which were measurable like CO2 emission, waste, etc.

2) The market became a central factor when the discussion is about transformation from conventional to ecological food. The focus has increasingly been set on price and suppliers of the organic products. Market actors play an ever larger role in many of the projects. From the mid 1990s several private companies (processors, retailers) and consultants followed in the aftermath of the organic conversion projects.

3) The state (municipalities or counties) has increasingly been involved into the "ecological projects" and is seeking to involve the relevant actors, both market actors and citizens/NGOs. This has especially been the

case with some environmental/organic organisations. Especially the larger municipalities were actively pushing "organic projects" in the mid 1990s, and often in cooperation with central market actors (processors, suppliers, etc) and some of the environmental organisations. The KØSS-case of Copenhagen is an example of this.

4) NGOs have also changed their role over the last twenty years. They became active players in the development towards a sustainable society contrary to earlier social movement that had fought against the industrialisation project. The organic movement is an example for this transformation. This movement has its roots in the critique of capitalism. By now, it is partly integrated in the traditional agricultural organisations and is mainly focusing on activities related to the demand for organic products, and here the organic catering projects have become interesting.

The organic projects and some of the ideas behind the projects have to some extend been assimilated to the dominant understanding of environment, especially in the public administration. In the last years these ecological projects became a central part of the environmental performance of the municipalities.

5. References

Creed, P.G. (2001): The potential of foodservice systems for satisfying consumer needs. Innovative Food Science and Emerging Technologies 2 (3), 219

Elle, J.C. (2004): The Plate of the Future Challenges for the organic conversion of public sector catering in Denmark, Food: new desires, new concerns and new forms of consumption, IRSA 2004, July 25-28, Trondheim, Norway.

Hansen, S.R./Schmidt, H. W./Nielsen, T. and Kristensen, N. H.(2008): Organic and conventional public food procurement for youth in Denmark. Bioforsk Report no. 40, Innovation and Sustainability, Technical University of Denmark.

Hansen, K. (1996): Når offentlige køkkener vil handle grønt [When Public organizations want to buy green], Miljø- og Energiministeriet, Miljøstyrelsen, København.

Kristensen, N H and Nielsen, T. (2007): Økologi mellem radikalitet og indefinering: Når økologien bliver markedsorienteret. In: Økologisk modernisering på dansk: Brud og bevægelser i miljøindsatsen, Frydenlund, p. 443-464.

Kryger, P. and Olsen, A. (1987): Rammer for storkøkkenproduktion i offentligt og privat regi, [Limmits for large scale production in public and privat kitchens] Teksam, Roskilde University Center.

Laberenz, H.and Naatz, O.-W. (2000): Biogerichte im Betriebsrestaurant. Ökologie & Landbau (1/2000), p. 39-40.

Mikkelsen, B.E./ Kristensen, N.H. and Nielsen, T. (2002): Organic foods in catering – the Nordic perspective, Publication from Veterinary & Food Administration, Denmark.

Mol, A. (1995): The Refinement of Production: Ecological Modernization Theory and the Chemical Industry.

Nielsen, T./Kristensen, N.H. and Mikkelsen, B.E. (2002): Anvendelse af økologiske fødevarer i kommuner og amter [The use of organic foods in Danish municipalities and counties], Publication from Veterinary & Food Administration, Denmark.

Rech, T. (2002): Organic food for public institutions. Organic-agriculture-sustainability-markets-and-policies OECD workshop on organic agriculture, Washington DC 23-26 September, 401-440.

Warde, A. and Martens, L. (1998): A sociological approach to food choice. The case of eating out. In: Murcott, A. (eds.): The Nation's Diet. The Social Science of Food Choice. London/New York: Longman, p. 129-144.

Zinck, O. (1995): Hospital catering: an evaluation of the technology . concise report. Danish Catering Centre.

Znaor, D. (2001): Overview of development of organic food and farming in the CEE – elements for a regional action plan, Proceedings from conference on Organic foods and farming – 10-11 may Copenhagen.

Organic Certification in the iPOPY Countries and Germany – Current Status and Future Challenges

Carola Strassner[1)], Rainer Roehl[2)]

[1)]University of Applied Sciences Muenster, Homes Economics and Nutritional Science, Germany. strassner@fh-muenster.de
[2)]a'verdis – Sustainable FoodService Solutions, Muenster, Germany. rainer.roehl@a-verdis.com

1. Introduction

The study of innovative Public Organic food Procurement for Youth (iPOPY) is the subject of one of eight CORE Organic research projects (Coordination of European Transnational Research in Organic Food and Farming). Within a number of European countries, namely Italy, Denmark, Finland and Norway, attention is being given to the ways in which an increased consumption of organic food may be achieved by the implementation of relevant strategies and instruments linked to food-serving outlets for young people. As one of a number of specific aspects the procedures for organic certification of serving outlets is being examined, using Germany as a reference case.

All iPOPY countries are subject to the Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products since it came into effect on January 1st 2009. This regulation repeals the hitherto valid Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs, and its amendments. With respect to organic certification Member States are required to set up an inspection system operated by one more designated inspection authorities and/or approved private inspection bodies for the verification of organic quality.

The revised regulation differs from its predecessor with respect to foodservice in one important aspect: it specifically excludes so-called mass catering operations. However, Member States may apply national rules or private standards insofar as these comply with community law. The implementing rules make no further reference to mass catering operations (Commission Rgulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control).

Currently and for a period of time just prior to the new regulation taking effect, the iPOPY countries have slightly diverging verification systems in general and specifically with respect to certification of out of home (foodservice) operations. Denmark and Finland employ a system of designated public inspection bodies while Italy, Norway and Germany have a system of approved private inspection bodies. Of these Germany and Norway consider out of home operations claiming organic status as necessitating verification and have similar systems whereas Denmark and Finland offer operators defined categories of organic use. Though Italy is the forerunner of organic use in schools there appears to be no national or other verification system in operation (Strassner/ Løes 2009). In part the application of the EU Regulation is a grey area, members of inspection authorities voice opinions only, which remain unsubstantiated and unsupported. In order to explore how iPOPY countries deal with out of home operations claiming organic status, inspection bodies are interviewed as to their practical dealings with such operations.

2. Materials and Methods

Using the reference case Germany, which has clear guidelines for the inspection and certification of out of home operations using organic produce (Strassner et al. 2008), a questionnaire was devised to analyse the status quo of foodservice certification.

The questionnaire comprised seven questions of which three had two parts. Three questions were open and required a quantity to be estimated; all others were closed questions with categories provided where appropriate. As such the closed questions were appropriate to the purpose of analysis, making comparison easier, while richness and meaning were low but were not the object. The questionnaire was subjected to a pre-test with a certification and a foodservice expert. Minor adaptations were made to some categories on account of the pre-test.

The sample comprises all 23 inspection bodies which are approved at the level of the Länder (federal states) and may have their activity limited to certain specified Länder. At each inspection body one person was interviewed, irrespective of the number of offices the body may have throughout Germany. Fieldwork was undertaken in January and February 2009. Participation was voluntary and non-compensated.

The questionnaire was sent to the management of the inspection body. It was attached to an email explaining the proposed study to be answered by management or delegated to the responsible employee(s). The email was followed up by a telephone call with a request for a telephone interview appointment. An interviewer called the inspection body at the appointed time and day to proceed with a telephone interview with employee responsible or delegated for this task. This allowed the interviewee at the inspection body the time to check on some data pertinent to the questions before the interview. The interviewer recorded the answers in an own questionnaire. The methodology chosen was thus more personal than a self-administered questionnaire and was useful for generating data which is deemed by some to be slightly sensitive.

3. Results

Of the 23 inspection bodies contacted, 5 did not participate in the telephone interview. Reasons given were either that they have no foodservice operations in their clientele (n=3) or that they did not want to disclose any data (n=2). Due to their extensive travelling commitments, delegated interviewees at 6 bodies could not be reached in time.

The function of the persons interviewed at the inspection bodies was given as "management" (n=5), "head of department" (n=3), "auditor" (n=2) or "consultant" (n=2). Of the 12 inspection bodies interviewed 6 have an employee that is responsible for out of home operators while 6 do not. Inspection bodies numbered their out of home clients (companies or organisations) between 5 and 250, which together add up to a number of individual outlets between 5 and 600. For most of the bodies (n=8), out of home operations made up less than 5 % of the total amount of operations audited (irrespective of type); for two bodies these operations make up more than a fifth of all audited operations. Types of individual out of home outlets subjected to inspections included the full foodservice spectrum, in descending order: institutional catering, restaurants, hotels, professional foodservice, other.

In Germany foodservice operations are considered "transformers" with respect to the EU Organic Regulation. Two of the inspection bodies indicated that the number of out of home operators in their clientele was increasing in comparison to other transformers such as food manufacturers, 4 saw no difference to other sectors while 6 saw a relatively weaker increase.

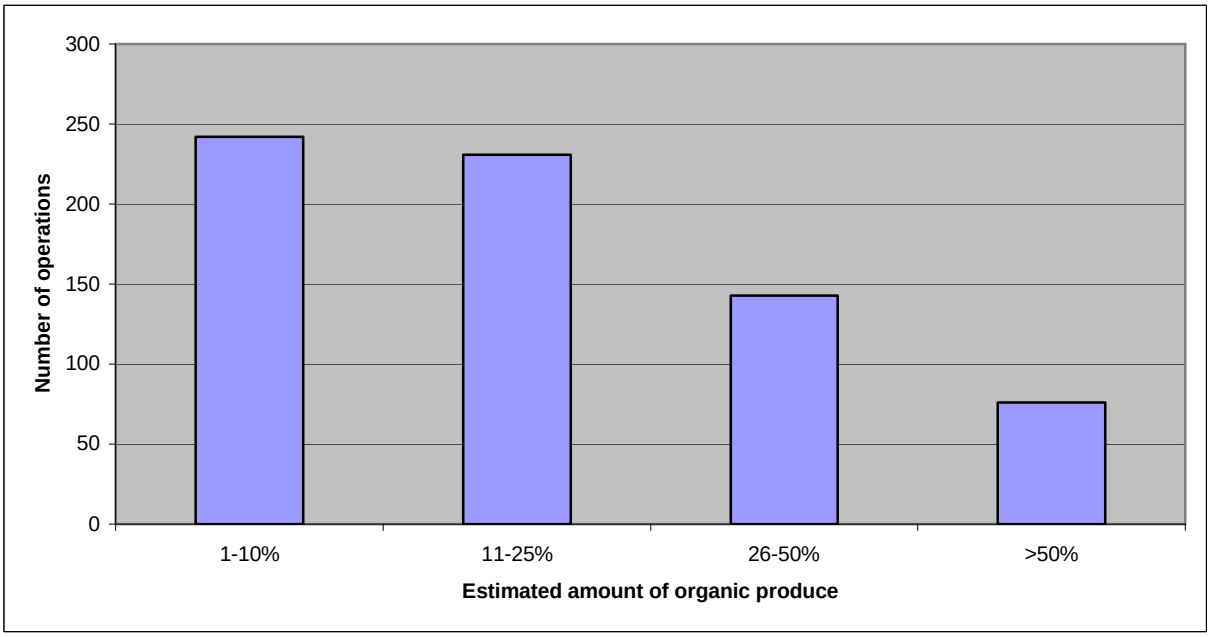
Interviewees were asked to voice an opinion as to which type of organic food inclusion was most often employed, and to rank from 1 to 5 the five items supplied (1 = most common). Results are shown in Table 1 below. The number in a cell indicates the number of inspection bodies conferring this rank on the labelling option. Of the 12 respondents, 2 were unable to develop a ranking as their operations were equally spread throughout the categories. Labelling in the foodservice context in all Länder provide three variants: (i) organic ingredients, e.g. all potatoes used are organic only, (ii) an organic component, e.g. a side salad, (iii) an organic dish, e.g. organic pizza (Strassner et al. 2008). Any combination of these may be used by an operation. In order to claim the status of an organic restaurant, all produce used needs to be certified organic.

Tab. 1: Ranking of the types of organic products offered in out of home operations (n=9)

Rank given by inspection bodies	complete replacement of "conventional" by organic ingredients (i)	use of single organic meal components e.g. side dish (ii)	a complete organic menu or an organic line (iii)	a combination of these (i, ii, iii)	all food in organic quality, fully organic
1	1	5	4	0	1
2	3	0	5	2	0
3	2	1	1	3	2
4	2	4	0	3	1
5	2	0	0	2	6

Of those out of home operators inspected, the percentage of organic produce as compared to non-organic produce is estimated by interviewees as presented in Fig. 1 below. Four inspection bodies gave no answer.

Fig. 1: Estimation of the amount of organic produce used by out of home operators according to inspectors



4. Discussion

Inspection bodies with own persons responsible for the out of home sector does not seem to be a function of size, neither in terms of the absolute (or relative) amount of foodservice operations nor in terms of the overall size of the inspection body. Some added as an explanation that out of home operators belonged to the category "transformers" and hence had no specially allocated contact person.

Since the auditing of out of home operations was monitored in Germany there has been a steady increase in the amount of certified operations over the years. In the press release archive of the campaign website "1000bioküchen" (translated: "1000 organic kitchens") the development proceeds from 450 operations after the first campaign year late 2004, to 750 in late 2005 and to 1000 certified kitchen operations in late 2006 at the end of the campaign. While the growth is distinct the amount of certified operations is still a very small proportion both of the total foodservice market in Germany and also for most of the inspection bodies (it makes up less than 5 % of audited operations for 13 of the 16 bodies reached). Also according to the majority of the interviewees it is apparently not increasing relative to their other types of operations.

All inspection bodies audit across the full spectrum of foodservice operations though most operations can be classified as catering operations. Furthermore, only 3 bodies had the same amount of operators as they had operations; all other inspection bodies had operators with a number of operations (outlets). Possibly such customers are more attractive for inspection bodies as multiple operations may be covered by one negotiation and contract.

In Germany labelling of organic produce in a catering or restaurant setting is clearly described. According to this survey the labelling least used (i.e. the lowest rank given by most bodies) was "fully organic". The most used labels (i.e. the highest rank given by most bodies) were "organic menu" (ranked 1 by n=5 and 2 by n=4 bodies) followed by "organic components" (ranked 1 by n=5). "Ingredients" were ranked equally high and low. In a recent survey in Italy (Bocchi and Spigarolo, 2009) caterers indicated that they would prefer to certify the meal and/or the ingredients while the producers indicated that they would prefer to certify the catering and the ingredients – all of which are possible in the German system. Considering that most operations use a small amount of organic produce per operation, most operations using less than 25 % organic produce, the flexibility afforded the operators by the labelling options seems quite important.

A number of limitations need to be borne in mind in the analysis of the above data. It proved difficult to gather some of the data as it was deemed too sensitive by the inspection bodies. Grounds were not given but may include concern that individual bodies can be identified even from anonymous data and/or because inspection bodies are in competition with one another in the German system. It proved difficult to examine some aspects in depth as there is no differentiation within the data on foodservice operations; such statistics are not gathered by the inspection bodies.

5. Conclusions

In a next step the fieldwork will be extended to the other iPOPY countries i.e. the questionnaires and interviews will be administered in Denmark (eleven Danish inspection bodies), Finland (eighteen Finnish inspection bodies), Italy (sixteen Italian, four German and one Austrian inspection bodies) and Norway (one Norwegian inspection body) according to the List of Bodies or public authorities in charge of inspection provided for in Article 15 of Council Regulation (EEC) No 2092/91 (2008/C 13/03).

Acknowledgements

The authors express their gratitude to the iPOPY team and all German inspection bodies that took part in this survey.

6. References

Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs [http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20070101-en.pdf]

Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:189:0001:0023:EN:PDF]

Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:250:0001:0084:EN:PDF]

Strassner C & Løes A-K (2009) Is there any certification of public organic procurement in iPOPY countries (DK, FI, IT, NO and DE)? p 57-61 in Strassner C, Løes A-K, Kristensen NH and Spigarolo R (Eds.) (2009) Proceedings of the Workshop on Organic Public Catering at the 16th IFOAM Organic World Congress, 19th June 2008 in Modena, Italy. Proceedings 16th IFOAM Organic World Congress, Modena, Italy, June 19, 2008. 190 p Core Organic Project Report Series. ICROFS, Denmark.

Strassner, C./ Roehl, R. E. and Neuendorff, J. (2008): Easy Steps to Organic Certification. A Manual for Canteens, Restaurants and Foodservice Operators. 22 p

1000bioküchen (1000 organic kitchens) Press archivi at http://www.1000bioküchen.de/bk61.html

Bocchi, S./ Spigarolo, R./ Sarti, V. and Franceschi, A. (2009): Survey about the opinions of organic producers and caterers on the main constraints in Public organic food procurement for school catering in Italy. p 67-75 in Strassner C, Løes A-K, Kristensen NH and Spigarolo R [Eds.] (2009) Proceedings of the Workshop on Organic Public Catering at the 16th IFOAM Organic World Congress, 19th June 2008 in Modena, Italy. Proceedings 16th IFOAM Organic World Congress, Modena, Italy, June 19, 2008. 190 p Core Organic Project Report Series. ICROFS, Denmark.

List of Bodies or public authorities in charge of inspection provided for in Article 15 of Council Regulation (EEC) No 2092/91. (2008/C 13/03) 18.01.2008 26 p

Organising supply chains of organic products for Italian school meals – The case of the province and of the city of Piacenza

Stefano Bocchi,[1)] Roberto Spigarolo,[1)] Marco Valerio Sarti,[1)] Benjamin Nölting[2)]

[1)]Dipartimento di Produzione Vegetale – Di.Pro.Ve., Università degli Studi di Milano. stefano.bocchi@unimi.it; roberto.spigarolo@unimi.it; marco.sarti@unimi.it
[2)]Center for Technology and Society of the Berlin Institute of Technology, Germany. noelting@ztg.tu-berlin.de

1. Introduction

Serving high quality school meals is a difficult task. Many factors influence the meal quality. Products – transformed through several supply chains – are composed at the caterer's kitchen to become a healthy and tasty menu. Quality is limited by the poorest quality or the weakest link in this net of supply chains (AMIQUA 2006, Bocchi et al. 2008). One very important step in ensuring high quality is to define it. This calls for a detailed and thorough description of what is understood as food or product quality that has to take into consideration the regional food culture, the possibilities of e.g. local and organic producers and the requirements of caterers, at the same time (Spigarolo 2006a, 2006b).

The following paper analyses how high quality can be ensured by the organization of these supply chains. It is a case study on school meals in the city and the province of Piacenza, an example of best practice in Emilia Romagna, Italy. The study was conducted in work package 3 on supply chain management of the iPOPY project.

2. Methodology

Empirical data for this case study was collected by some expert interviews with representatives of the school meal system (local politicians, caterers and producers) conducted in January and February 2009. Further empirical data were the call for tender, the contract, the technical schedules of products, regional laws and guidelines.

All this material was collected according to a specific check list prepared for this case study in a first step. All critical information for the study is contained in this check list. It is divided in 4 paragraphs: supply chain analysis, management of raw materials for caterers, technological process, and further information. This check list was completed by questionnaires submitted to producers, caterers and local politicians.

After the compilation of this information (the check list) that we gathered from the stakeholders we had contacted, we organized a focus group with them all, in order to validate the information and to discuss the most critical elements emerged.

3. The situation in the city and in the province of Piacenza

Piacenza, a city of about 95.000 inhabitants, and its province (282.000 inhabitants) are located in Emilia Romagna region, in the northern part of Italy. Since 2001, Emilia Romagna has a very ambitious law with regard to the quality of school meals and to food education. E.g. for day care institutions 100% organic food is required, and for school meals in primary and secondary school a share of 70% organic or quality food (e.g. PDO - Protected Designation of Origin and PGI - Protected Geographical Indication) is mandatory. The region provides services and assistance free of charge for every municipality willing to use organic, regional, and/or fair trade products, by a website (www.sportellomensebio.it).

As in all other Italian cities, the municipality is responsible to provide meals to children who are present full time during the school day (Bocchi et al. 2008). The province of Piacenza has a great vocation for food and agriculture, in fact, they are its main resources. Food is not conceived as a physiologic need but it is considered being a cultural and social expression. These considerations are very important to understand the philosophy that inspired the political activities for food catering in school canteens.

A short history of school meals in Piacenza

Since 2004, the municipality of Piacenza has procured local organic food for the school catering service and since 2005 for other municipalities of the province. Every five years municipalities make a new tender to choose the company that will manage the school catering service. The issuing of specific regional laws and guidelines were an important driver in Italy to introduce organic and local products in the school canteens. Besides this, the local politicians pay attention to environmental considerations, to food quality and to the valorization of local production. Piacenza and its province are an excellent sample of this political will.

These elements are the most important drivers for writing demanding contracts by local administrations. The specifications of the tender contracts are very complex. It is not simple to win the tender.

CIR – Compagnia Italiana Ristorazione – is the food service company that won the current tender (2006-2011). CIR was able to satisfy the needs and the inspirations of the local administrations better than its competitors. In fact, CIR has made an agreement with local producers for the supply of organic products. Moreover, it has offered more organic and quality products than the municipality asked for in the tender contracts.

The following analysis of the organization of the school meals consists of the following elements:

- technical elements: supply chain analysis and technological process of food catering
- administrative elements: call for tender and economic conditions.

4. The technical organization of school meal provision

As described above, the municipality of Piacenza, and later the other municipalities of this province, has charged the private caterer CIR with the provision of all school meals in Piacenza from 2006 to 2011. CIR uses a central food preparation unit in Piacenza (this structure belongs to the municipality) where the meals are prepared and (only to a small part) precooked. The prepared food is brought to the 27 school kitchens where the meals are finally cooked and served in the dining halls of the schools.

Photo 1: Organic farm of Piacenza

Only in 7 schools the meals are provided precooked. CIR gets the produce from a network of local and regional farmers and processors that have its nucleus in a farmers marketing cooperative which is called BIOPIACE Consortium. (BIO means Organic and PIACE means Piacenza and also "I like"). BIOPIACE markets mostly organic food items, but also some conventional locally produced, e.g. meat.

4.1 Supply chain analysis

Before sending out the call for tender, the local administrations developed a technical schedule in which the wanted features of the products were described in detail and in a way that they can be controlled. So the call for tender required that some products must be organic. CIR offered even more organic products in order to have a better score in the tender. The following supply chains were analyzed in detail: milk and dairy products, cereals, bread, pasta etc., meats and by products, and fruits and vegetables.

a) Milk and dairy products
In addition to that, Organic milk and dairy products (both imposed by the municipality and additionally offered by CIR) are on average 60% of all milk and dairy products procured. The total number of suppliers for milk and dairy products is four, two of them are organic. They provide organic milk (UHT – Ultra High Temperature - and pasteurized) as it is required in the tender. Further, the Grana Padano cheese is organic. That was not required but was an additional offer by the catering company (CIR). Typical local foods and yoghurt are from local producers, but they are not organic.
The dairy supply chain can be labelled as a short chain because CIR buys milk, butter, Grana Padano and Parmigiano Reggiano directly from local producers. The company controls some producers following a microbiological analytical plan on cheeses. The approximate number of milk and dairy products procured by CIR is 15 different commercial items such as: yoghurt, milk UHT, milk pasteurized, butter, Grana Padano cheese, and so on.

b) Cereals and by products: bread, pasta etc.
The local administration developed a technical schedule in which the wanted features of products were described, before sending out the call for tender. The Municipality required that all pasta, rice and flour are organic. Organic bread is required just one day per week for each school. Further, CIR offered some typical local biscuits that are produced by using organic raw materials. The supply chain for cereals and by products cannot be considered to be a short chain. Organic pre-packaged products (rice, flour and pasta) are marked through special labels. The approximate number of cereals and by products procured by CIR is 13 different commercial items such as: bread, flour, pasta, rice, biscuits, and so on.

c) Meat and by products
In this supply chain there are no organic products. However, the choice of the administration was to use local meat. The system of control for the origin of the meat is based on controls carried out directly on the farms. These controls are based on the rigid requirements of European legislation about traceability (controls on feeds, on animals' passports and documentation, on veterinary treatments, microbiological analysis of meat and so on).
The contract tender impose that meat must be obtained from animals born, bred and slaughtered in Italy. CIR has offered conventional and local meat, which is also marketed by BIOPIACE. There is no other meat supplier and the supply chain is short. In Italy only small quantities of organic meat are produced.

d) Fruits and vegetables
The local administrations decided that fruits and vegetables must come from the province of Piacenza (local products), and CIR buys it from the BIOPIACE Consortium (short supply chain). Moreover, local administrations required organic fruits and vegetable in great quantities (organic fruits and vegetables are approximately 90% of the total amount of fruits and vegetables). The remaining 10% of fruits and vegetables that are not organic come from sustainable respectively integrated agriculture.
If BIOPIACE Consortium lacks of availability of some products, CIR buys fruits and vegetable from another supplier located in Emilia Romagna region.

4.2 The technological process of food catering

Every day during the week, 4.500-5.500 schools meals are served in the city of Piacenza, summing up to 900.000 meals per year. The daily changes of the number of school meals are due to different time schedules, pupils do not stay at school in the afternoon every day (Bocchi et al. 2008).

All raw materials are delivered to the central preparation centre (CPC). The supply of the produce is planned on a weekly basis in order to guarantee a good quality (freshness, right turn over of products) of the raw materials. This means, for instance, that vegetables arrive twice a week, on Tuesday and on Thursday, meat arrives once a week, on Wednesday. This organization, connected to the short chain, ensures that all fresh products can preserve their whole nutritional quality (regarding in particular the contents of vitamins, original flavors and all the other thermolabile components) and that they are consumed when their shelf-life balance is still high.

The availability of the organic or typical local and regional produce is guaranteed by the organization of local producers. They organize a common logistic and supply system which they call "self management": they share the transportation of all their products to the CPC. Organic products are labeled with a specific logo so they can be easily identified (see photo 2).

Photo 2: Organic grana padano (typical cheese of Piacenza)

In the CPC there are two kinds of technological processes. The first one is the preparation of semi finished foods for the local cooking kitchens (LCK) dislocated in the schools. All together, there are 27 such school kitchens. The operation performed are cutting, cleaning, portioning and vacuum packaging for meat and fish or cleaning, cutting and packaging for vegetables. When ready, these semi finished foods are transported to LCK keeping a chill chain (T<+10°C).

The second technological process is the preparation of the meals for the 7 schools that do not have a LCK. In this case, meals are prepared and cooked entirely in the CPC and then transported warm in special boxes that are able to maintain a temperature over 65°C. The transportation, made by trucks, takes 15 minutes at maximum.

5. The administration of school meal services

5.1 Drivers and stakeholders

The objectives of the Piacenza municipality linked with school meals are:

- to provide a service to children and their families
- to create a service based on the valorization of local territory
- to create a service based on environmental protection
- to provide children a food education and food culture

The environmental goals are an important driver for choosing organic food. Another driver for organic food are the standards defined by the regional law of Emilia Romagna. The involved stakeholders are described in detail as follows.

a) Political Local administrations
The driving force for setting ambitious quality objectives for school meals is a specific office of the local administrations. This office deals with school, education and social affairs. It is responsible of all services related to schools such as school meal system, children transportation to schools and so on. The head of this office is the councilor responsible for education, who is assisted by some consultants and advisors. The councilor and his management staff arrange the call for tender and the contract requirements and manage different aspects of the service such as:

- Carrying out technical controls on the service: there is a technical employee (normally a food technician) that goes every day in the kitchens to check the production conditions
- Verifying customer satisfaction
- Monitoring the costs of the service in accordance to the budget plan
- Managing the personnel of the food preparation

All together, this office is responsible for all food catering service because it has to choose the company that will manage the service and the specific requirements of the service. The decisions of this office are influenced by the economic office of the municipalities (this is the office responsible of economic management of the municipalities) and by the "Commissione mensa" (see following paragraphs). Let's see in detail the different stakeholders of the system:

b) Users of the service: parents, teachers and children:
We distinguish between direct users (children) and indirect users (teachers and parents). Indirect users have their own representatives in the "Commissione Mensa": a body of representation that can communicate with the public administration about the kind of menu and ingredients and about the hygienic conditions of the meal production. It may also influence the public administration with respect to the guidelines of the contracts.

c) Public Organic Surveillance Body
The office of human nutrition of the public health service prepares a menu for a period of six weeks. Their proposal can be discussed with local administrations, the private company and the Commissione Mensa, but it is up to this body taking the final decision on the menu.

d) Private Company of food service
The CIR company has won the contract. It prepares food in CPC with 6-7 employees.

e) Consortium of local organic producers
This consortium, BIOPIACE, is the main supplier of CIR. It provides fruits, vegetables, meat, biscuits, milk and some cheese. Except meat all products are organic. The presence of BIOPIACE between CIR's suppliers was significant to help CIR to get the contract.

f) Other suppliers of private companies of food service
CIR does not have only BIOPIACE as supplier. It also has suppliers for organic dried products (rice, pasta etc.) and for the conventional dairy products.

5.2 Economic organization

The public administration covers at least 64 % of its costs by the money paid for school meals by the parents (see Table 1). The public administration thinks that the high costs of the school meals are the most relevant problem of management.

Table 1: Costs per school meal per day in Piacenza, dependent on the family income and number of children

Category	1 child per family	2 children per family	3 and more children per family
INTERA (FULL) Salary of family per year > 9.000 €	4,75 €	4,28 €	3,80 €
RIDOTTA (REDUCED) 4.300 € < Salary of family per year < 9.000 €	2,85 €	2,57 €	2,28 €
ESENZIONE (EXEMPTION from PAYMENT) Salary of family per year < 4.300 €	1,50 €	1,35 €	1,20 €

5.3 Tender procedure

The municipality of Piacenza developed criteria in order to evaluate the bids for the public tender. These criteria were based on a specific Italian law (D. Lgs 163/2003). In particular, Piacenza gave:

32 POINTS to the Company that presented the best economic offer (Economic part)
68 POINTS to the Company that presented the best technical offer (Quality part)

The 68 points of the quality part were divided as follows:

10 POINTS for organic products
4,5 POINTS for sustainable agriculture
4,5 POINTS for PGI, PDO products
0,5 POINTS for fair trade products
4,5 POINTS for short supply chain
44 POINTS for improvements of the refectories and of the cooking centers

The municipality of Piacenza imposed in the contract some kind of organic food; mainly: pasta, apples, tomato sauce, oranges, kiwi, bread (only one time per week), milk, rice, tomato, lettuce, and flour. CIR, that won the tender, added to its offer the following organic products: yogurt, lemons, grana padano (cheese), biscuits, cauliflower, frozen spinach, and jam.

6. Conclusions

Healthy nutrition for children and youths is a hot topic in public debates around Europe. Public food procurement for youth can play a crucial role and some public authorities have acknowledged their responsibility to provide sustainable nutrition.

According to Spigarolo and Donegani (Spigarolo/ Donegani 2009), sustainable food for young people should be safe, tasty, nourishing, produced respecting the environment, produced respecting ethical principles (social fairness, animal well-being...), and rewarding: it must meet the needs of psychological and social satisfaction of the consumers.

Healthy and sustainable nutrition can be well-organized by school meal policies, but this choice must be shared with an educational program carried out during the school-time devoted to educate young aware consumers. This can really be the new frontier of food education.

7. References

AMIQUA– Associazione per il miglioramento della qualità della vita (ed.) (2006): MANGIARE FUORI CASA - Progetto n. 157 Obiettivo ristorazione: tariffe, prezzi, qualità. Miglioramento della condizione informativa dei consumatori sui prezzi e servizi rapportati a standard di qualità predefiniti nel settore della ristorazione - Progetto cofinanziato dal Ministero delle Attività Produttive - Direzione Generale Armonizzazione del Mercato e Tutela del Consumatore - Le dinamiche relative alla qualità ed al rapporto qualità/prezzo nel settore della ristorazione
http://www.acu.it/progetti/mangiar/materiali/risultati%20indagine/Relazione%20FOCUS%20GROUP%20FF.pdf

Bocchi S./ Spigarolo R./ Marcomini N. and Sarti, V. (2008): Organic and conventional public food procurement for youth in Italy. Tingvoll, Norway: Bioforsk (Bioforsk Report No. 42; iPOPY discussion paper 3/2008).
http://orgprints.org/13347/

Spigarolo, R. [Ed.] (2006a): MANGIARE FUORI CASA - Progetto n. 157 Obiettivo ristorazione: tariffe, prezzi, qualità. Miglioramento della condizione informativa dei consumatori sui prezzi e servizi rapportati a standard di qualità predefiniti nel settore della ristorazione - Progetto cofinanziato dal Ministero delle Attività Produttive - Direzione Generale Armonizzazione del Mercato e Tutela del Consumatore - RELAZIONE SULL'INDAGINE RELATIVA ALLA RISTORAZIONE SCOLASTICA - analisi sincronica - anno di riferimento: 2005-2006
http://www.acu.it/progetti/mangiar/materiali/risultati%20indagine/Relazione%20ristorazione%20scolastica.pdf

Spigarolo, R. [Ed.] (2006b): MANGIARE FUORI CASA - Progetto n. 157 Obiettivo ristorazione: tariffe, prezzi, qualità. Miglioramento della condizione informativa dei consumatori sui prezzi e servizi rapportati a standard di qualità predefiniti nel settore della ristorazione - Progetto cofinanziato dal Ministero delle Attività Produttive - Direzione Generale Armonizzazione del Mercato e Tutela del Consumatore - RELAZIONE SULL'INDAGINE RELATIVA ALLA RISTORAZIONE ISTITUZIONALE - analisi diacronica - anno di riferimento: 2005-2006
http://www.acu.it/progetti/mangiar/materiali/risultati%20indagine/Relazione%20Ristorazione%20istituzionale.pdf.

Spigarolo, Roberto and Donegani, Giorgio (2009): Practice of organic food in Italian schools. In: Mikkola, Minna/Mikkelsen, Bent Egberg/Roos, Gun (eds.), Like what you get? Is it good for you? Proceedings of the seminar held at University of Helsinki, Ruralia Institute 21.-22. January 2009, Helsinki, Finland. Tjele, DK: International Centre for Research in Organic Food Systems (ICROFS) (CORE Organic Project Series Report), p. 27-33.

CORE Organic

innovative Public Organic food Procurement for Youth (iPOPY)

Abstract
The main aim of iPOPY is to identify and describe efficient ways of implementing organic food in public serving outlets for young people. Young people are the future daily food shoppers and guests for the out-of-home eating sector, and most European governments search for strategies to foster sustainable nutrition, including an increased consumption of organic food. As the youth resides longer in public institutions and eating habits are often unsatisfactory, school meals attain large public interest as a lever for change. School meal systems are the main practical cases in the project, and hindrances and promoting factors for organic food to be consumed in schools are explored in Denmark, Finland, Italy and Norway. The school meal systems in these countries are highly diverse. Whereas Finland and Italy have well developed systems with warm lunch served daily for all pupils, Denmark and Norway rely on a packed lunch brought from home. Italy and Denmark have ambitious goals for the consumption of organic food in schools, whereas Finland and Norway have not focussed much on organic food in schools so far. The project has four explorative work packages, studying policies, supply chains and certification, the young consumers' perception and learning about sustainability and organic food, and health effects of organic menus. A coordinative work package ensures project management and draws the main conclusions. More information, newsletters and publications are found at the project web site, www.ipopy.coreportal.org.

Contact person for this report: Benjamin Nölting noelting@ztg.tu-berlin.de

Project Co-ordinator: Anne-Kristin Løes, Bioforsk Organic Food and Farming, N-6630 Tingvoll, Norway.
E-mail anne-kristin.loes@bioforsk.no, phone +47-404 79 962

ISBN: 978-87-92499-00-4

iPOPY