

Bioforsk Report

Vol. 5 No. 110/ 2010

iPOPY discussion paper 7/2010

Organic and conventional public food procurement for youth in Norway

Anne-Kristin Løes



Münster University of Applied Sciences



SIFO

Statens institutt
for forbruksforskning
National Institute
for Consumer Research

AALBORG UNIVERSITY



UNIVERSITY OF HELSINKI

Ruralia Institute





Main office
 Frederik A. Dahls vei 20,
 N-1432 Ås
 Tel.: (+47) 40 60 41 00
 Fax: (+47) 63 00 92 10
 post@bioforsk.no

Bioforsk Organic Food and Farming
 Gunnars veg 6
 6630 Tingvoll
 Tlf: + 047 03 246
 Faks: + 47 71 53 44 05
 okologisk@bioforsk.no

Title: Title: Organic and conventional public food procurement for youth in Norway			
Author(s): Autor: Anne-Kristin Løes			
Date: August 5, 2010	Availability: Open	Project No.: 2010099	Archive No.: 631
Report No.: 5(110) 2010	ISBN-no.: 978-82-17-00679-4	Number of pages: 29	Number of appendix: 3
Employer: Bioforsk Organic Food and Farming		Contact person: Anne-Kristin Løes, anne-kristin.loes@bioforsk.no	
Stikkord: Økologisk mat, barn og ungdom, offentlig matforsyning, helse, skolemat		Arbeidsområde: Økologisk mat og landbruk	
Keywords: Organic food, youth, public procurement, health, school meal systems		Field of work: Food policy and nutrition	
<p>Summary: Young consumers are an important target group, because habits are established at young age. Hence, introducing children to organic food in public settings such as schools may be an efficient way to increase the consumption of organic food.</p> <p>In Norway, public procurement of food to youth is not well developed in comparison to many other European and Scandinavian countries. Many kindergartens provide some simple dishes for the children, and upper secondary schools usually have canteens where food items, sometimes also warm dishes, may be purchased. Canteens are becoming more common in other schools, especially on the lower secondary level. However, the usual lunch for most children in Norway in 2010 is a packed lunch (sandwiches) brought from home, consumed in the class room. School subscription schemes for milk were introduced around 1970, and for fruit around 1995. By June 2010, organic milk in 0.25 litre containers ("school milk") is offered only in Mid-Norway, and organic fruit is hardly offered at all. Since 2007, fruit is served without payment in all schools with a lower secondary level (class 8-10 or 1-10). This effort was introduced as a first step to develop a free school meal in all public schools, but has not been further developed so far.</p> <p>As in many other European countries, free school meals were offered (especially to poor children) in schools in the larger Norwegian cities around 1900. However, these meals were criticised for being unhealthy, and replaced by whole grain bread, milk and vegetables around 1930. Increasing private wealth, and increased demand for investments in school buildings, books etc changed the public priority and free school meals gradually disappeared. Today, there is not a general agreement about the optimal school meal composition, and whether or not the meals should be funded by the public. Several factors such as increasing lengths of the school day, and unsatisfactory scores in international comparison tests (e.g. PISA), should awake people's interest in school food. However, the public debate about school meals is in 2010 almost absent in Norway. The number of schools offering some kind of foods for sale e.g. in canteens is however rapidly increasing, which may contribute to change the school food situation.</p> <p>As a part of the "Økoløft" ("Organic lift") project and other initiatives, organic food has been presented and served for children in kindergartens, schools and other settings in several municipalities. Some cities (Trondheim, Stavanger) have set up public goals of organic consumption, including organic shares of food served in schools and child care. Such cases are briefly described, along with the Øya music festival and the Norwegian Armed Forces. The two latter cases serve significant amounts of organic food for relatively young consumers.</p> <p>The report was produced in the iPOPY project, "innovative Public Organic food Procurement for Youth". Similar reports have been produced for the other iPOPY countries; Denmark, Finland and Italy.</p>			

Sammendrag: Unge forbrukere er en viktig målgruppe, fordi forbruksvaner etableres tidlig. Hvis barn og ungdom presenteres for økologisk mat i offentlig regi, f eks på skolen, kan det være et effektivt tiltak for å øke forbruket av økologisk mat.

Sammenliknet med situasjonen i mange andre land i Europa, for eksempel Sverige og Finland, er det norske serveringstilbudet til barn og ungdom i offentlig regi lite utviklet. Mange barnehager tilbyr enkle retter, og videregående skoler har som regel kantiner med salg av ulike typer mat, til dels også varmretter. Kantiner blir også stadig mer vanlig, spesielt på ungdomstrinnet. Likevel er det matpakka, smurt hjemme, tatt med til skolen og spist i klasserommet, som dominerer det norske skolemåltidet i 2010. Abonnementsordning for skolemilk ble innført fra 1970 i regi av Tine. Abonnementsordning for skolefrukt ble innført fra 1995 i regi av opplysningskontoret for frukt og grønnsaker. Svært lite melk og frukt er økologisk per juni 2010. Økologisk skolemilk på kvartliters kartong tappes bare på ett meieri (Røros), og tilbys bare i Midt-Norge. I denne landsdelen var andelen av økologisk skolemilk 1 % utenfor Trondheim, og 5 % i Trondheim i første halvår av 2009. Bama anslår at det distribueres en økologisk frukt hver 3. eller 4. uke, det vil si en andel på ca 5 %.

Siden skolestart 2007 har alle skoler med ungdomstrinn fått penger fra staten til å tilby elevene en gratis frukt eller grønnsak hver dag. Denne ordningen ble sett på som et første steg i retning av et komplett og gratis skolemåltid i Norge, men har foreløpig ikke blitt fulgt opp med ytterligere tiltak.

Som i mange andre europeiske land ble det gitt gratis skolemat til fattige barn i de største byene (Oslo, Bergen) rundt 1900, og barn fra mer velstående familier kunne kjøpe maten rimelig. Disse måltidene ble kritisert for å være usunne, og ble erstattet med helkornbrød, melk, grønnsaker og tran rundt 1930. Bakgrunnen for den norske matpakka er "Sigdalsfrokosten", der en kommunelege fikk organisert det slik at elevene tok med seg den samme maten på skolen som det ble servert i Oslo. Økt privat og materiell velstand i samfunnet, og økt behov for investeringer i skolebygninger, bøker og annet utstyr gjorde at prioriteringene endret seg. Siste rest av offentlig skolemat i denne perioden forsvant da Osloskolene sluttet å servere gratis melk og frukt/grønnsaker til elevene rundt 1980.

I dag er det ikke enighet om hvordan det optimale skolemåltidet bør være, og heller ikke om dette burde vært betalt av det offentlige. Flere faktorer burde tilsi en mer engasjert debatt om skolemat. Skoledagen blir stadig lenger, og norske elever har gjort det dårligere enn ønskelig i internasjonale tester som PISA. Men den offentlige debatten om skolemat har stilnet i Norge fra iPOPY- prosjektet startet i 2007 til det avsluttes i 2010.

Likevel er det en rask økning i andelen av skoler som tilbyr mat for salg på ulike måter. På sikt vil dette medvirke til å endre bildet av det norske skolemåltidet.

Som en del av prosjektet "Økoløft" og andre initiativ har økologisk mat blitt presentert og servert i barnehager og skoler og andre sammenhenger i en rekke kommuner de siste par årene. Byer som Trondheim og Stavanger har vedtatt offentlige mål om økologisk forbruk, også i skoler og barnehager. Rapporten beskriver kort en del slike eksempler, inkludert Øyafestivalen i Oslo som satser tungt på økologisk mat, og det norske forsvaret, som har en målsetning om å bruke 15 % økologisk mat innen 2012.

Rapporten ble skrevet som en del av aktivitetene i prosjektet "Økologisk mat til ungdommen", iPOPY (innovative Public Organic food Procurement). Tilsvarende rapporter er utarbeidet for Danmark, Finland og Italia.

Approved

Project leader



Atle Wibe, research director



Anne-Kristin Løes

Contents

Preface	3
1 National conditions, political organisation and policies	4
1.1 Geographic and political structure	4
1.2 School and day-care structure in Norway	5
1.2.1 School structure	5
1.2.2 Day care organisation	6
1.3 Regulatory framework	6
1.3.1 The history of the Norwegian packed lunch -	7
1.3.2 Legislation	8
1.3.2.1 Public regulations.....	8
1.3.2.2 Public guidelines for schools and day-care centres.....	9
1.3.3 Certification of organic food	9
1.4 The context in which (organic) school meals are discussed and organised	10
1.4.1 Important promoters of organic food and school meals.....	10
1.4.1.1 The National Council of Nutrition	10
1.4.1.2 The Ministry of Education and Research and the Social Left party	11
1.4.1.3 A public goal for organic consumption	12
1.4.1.4 Oikos.....	13
1.4.1.5 Involvement from the parents	14
1.4.2 Overweight and obesity	14
1.4.3 Food on the school plates - practical hindrances	15
1.4.3.1 Hindrances on school level	15
1.4.3.2 Hindrances on delivery.....	16
1.4.4 Important arguments in the debate about school meals - an overview	16
2 Factual description of school meals in Norway	18
2.1 Eating patterns among Norwegian pupils 1991-2000	18
2.2 The school milk subscription service	19
2.3 The school fruit schemes.....	21
3 Development 2007-2010, with examples.....	23
3.1 “Økoløft” municipalities and ØOA-counties	23
3.2 Companies specialising in school food, and the Hundsund school restaurant	25
3.3 Norwegian iPOPY Cases.....	25
3.3.1 The Øya case.....	26
3.3.2 Trondheim municipality.....	27
3.3.3 The Norwegian Armed Forces go organic	28
4 Literature.....	30
Appendix 1: Guidelines for the school meals	31
Appendix 2: Guidelines for food serving and meals in day-care centres (kindergartens)	33
Appendix 3: Økoløft (“Organic lift”)	34

Preface

The iPOPY project - innovative Public Organic food Procurement for Youth - has conducted transnational research to increase the consumption of organic food among children and youth in public settings. School meals have been the main focus. National reports were published in February 2008 from each of the participating countries - Denmark, Finland, Italy and Norway - to present the school food systems in these countries, to which extent the systems contained any organic food, and how the introduction of organic food was initiated and organised. A comparative report to generalise knowledge and discuss differences based on the national reports was made in 2009 (Nielsen et al 2009). The present report is a revision of the national report from Norway made in 2008. All chapters are revised to update the content to the 2010 situation. A final chapter has been added to summarize the development in the (organic) school food sector since the autumn of 2007. The development has been both negative and positive. There seems to be a larger acceptance that public consumption should include at least some organic food, whereas the ambitions to introduce a free school meal have been downgraded.

Norway has no public procurement of school food. Hence, public food procurement for youth is much less developed here than in many other European countries. Denmark, Finland, Italy, Norway and to some extent Germany have been studied during the iPOPY project (2007-2010). In Italy and Finland, served meals are an integrated part of the school day. Denmark and Germany have many interesting projects going on to offer pupils a healthy nutrition while at school. This is further described in the revised national reports from these countries, all available in the digital archive Organic E-prints (www.orgprints.org). The present report describes the conditions that have to be considered if we aim for an increased public consumption of organic food among young people. Then, the school is a natural arena. Better nutrition for pupils during a steadily longer school day, and increased consumption of organic food may be two interesting goals to combine.

As organic food is hardly available in Norwegian schools, the report also presents some other examples of organic food procurement for young people. Organic food is served at music festivals, sports events and not least, in the Norwegian army.

This report is based on information available in scientific reports and papers, but also on a range of public websites. Website references and reports accessed by web are referred as footnotes, whereas cited papers are referred in the reference list.

All costs are referred in Euro and NOK. For simplicity, a fixed exchange rate has been used; 1 Euro = 8 NOK.

Several people, too many to mention by name, have contributed to the report by providing useful information. A warm thanks to one and each of them!

Serving organic food to young people in public arenas may benefit their health. Organic school meals may imply a range of possibilities to develop a good school culture, teach the pupils about sustainability and hence gradually change the world in a more promising direction. This vision has guided the iPOPY team during the work.

Tingvoll, August 2010

Anne-Kristin Løes

1 National conditions, political organisation and policies

1.1 Geographic and political structure

Norway is a sparsely populated country; 4.681 mill people share 323 802 000 km². This means 15 people per km², as compared to 17 in Finland, 126 in Denmark, 189 in Italy and 231 in Germany (SSB 2007). Norway is divided into 20 geographic units called “fylker¹” (county, province) and the counties are divided into five regions called “landsdeler”. The capital, Oslo, is a separate county (No. 3 in Fig. 1).

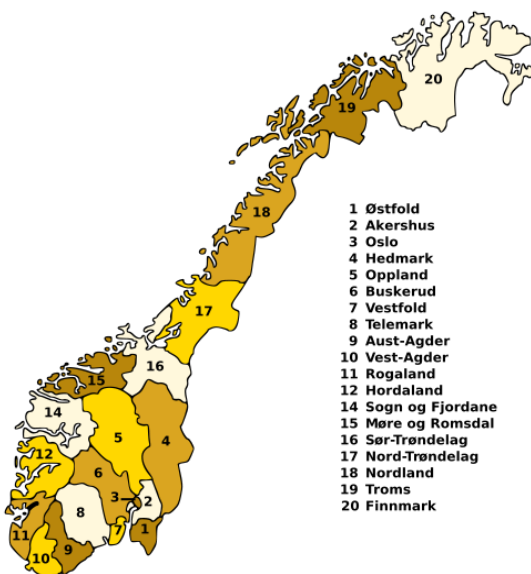


Figure 1. Map of Norway with 20 counties².

The five main regions of Norway are Sørlandet (counties Aust- og Vest-Agder), Vestlandet (Rogaland, Hordaland, Sogn og Fjordane), Østlandet (Oslo, Akershus, Østfold, Vestfold, Buskerud, Telemark, Hedmark, Oppland), Midt-Norge (Møre og Romsdal, Sør-Trøndelag, Nord-Trøndelag) and Nord-Norge (Nordland, Troms, Finnmark). However, these regions have no political function, and various regions exist for various purposes such as communication and health service. For example, Møre og Romsdal county (No. 15 in Fig. 1) is sometimes regarded as belonging to Vestlandet. Around 2005, a regional reform was much debated. The aim was that the current counties, which currently all have their own administration and political councils, should be replaced, or supplied by a regional level. However, as long as several different regions exist in parallel, it was very hard to agree on which regions would be optimal for all purposes. Hence, Norway sticks to its old system of municipalities (in total, 431 in 2007; 430 in 2010), counties and the national level.

For municipalities and counties, parallel elections for political councils (municipality councils + county councils) are held each 4th year, the last time in September 2007. National elections are also each 4th year, in between the local elections, the last time in September 2009. The red-green collaboration government, headed by Prime Minister Jens Stoltenberg since the elections in 2005, was re-elected in 2009. The government is composed of three parties; the Labour Party, the Socialist Left Party and the Centre party.

¹ All translations in this report are done by the author

² http://no.wikipedia.org/wiki/Norges_landsdeler

1.2 School and day-care structure in Norway

1.2.1 School structure

Norwegian children start school in mid-August the year they get six years old. The public primary and lower secondary education (“grunnskole”) comprises classes 1-10, and is divided into lower primary school (“barnetrinnet”, class 1-4), upper primary school (“mellomtrinnet”, class 5-7) and lower secondary school (“ungdomstrinnet”, class 8-10)³. After this, all children are offered three years in the upper secondary education and training system (“videregående skoler”). Most schools are built either for classes 1-7 (“barneskoler”) or 8-10 (“ungdomsskoler”), but schools comprising classes 1-10 (“barne- og ungdomsskoler”) are also common. Some schools with few pupils mix the classes to obtain convenient groups for teaching (“fådelte skoler”).

Nearly 100% of the youth start an upper secondary school, but quite a few do not complete the three or four year education. During 1997-2000, about 14 % dropped out of general studies programs (3 years at school), whereas 36 % dropped out of vocational programs (2 years at school + 2 years apprentice). The problem remains large also in 2010, and is a main field of interest for the current Minister of Education (Ms. Kristin Halvorsen).

In the school year 2009-10, close to 614 000 Norwegian pupils attained the mandatory primary and lower secondary school (“grunnskolen”)⁴. In total, there were 2297 such schools during 2009-10, generally owned and administrated by the municipalities. 156 primary and lower secondary schools are privately funded, mainly Waldorf, Montessori and schools run by Christian societies. On average between 1980 and 2006, the number of schools decreased by 13 each year. Schools are closed down mainly in rural districts with few pupils. The trend of closing down small schools increased significantly during 2007-2010; in this period 154 schools were closed^{5b}, and the main reason was reported to be lack of financial resources in the municipalities. As a consequence of the centralisation of the school structure, the number of pupils attaining large schools is increasing. Per 2010, less than 8 % of the children attained schools with below 100 pupils, whereas 54 % attained schools with more than 300 pupils⁵.

In October 2009, the total number of pupils in the upper secondary education was close to 191 000, and there were 542 such schools. About 25% (by 1999) of the upper secondary schools are privately funded. The other upper secondary schools are owned and administrated by the counties. Management of the upper secondary schools is one of the most important tasks of the counties (cf. the discussion about Norwegian regions, chapter 2.1). The upper secondary schools generally have higher numbers of pupils per school than lower level schools, and are often localised in cities so that the youth must travel longer distances or stay away from their family in bedsits (“hybel”). Upper secondary education is not mandatory in Norway, but all Norwegian citizens have the right to three or four years of free education at this level. All young people between the ages of 16 and 19 have a right to upper secondary education and training. The pupils can choose between vocational education programs (often with two years of theory and two years of practical training) or programs for general studies (usually three years of theory).

The Norwegian Directorate for Education and Training (“Utdanningsdirektoratet”, Udir) is responsible for the governance of the Norwegian education system.

³ http://www.udir.no/upload/Forskning/2009/The_Education_Mirror_2008.pdf (published October 2009; the version from 2009 will be available in the autumn of 2010)

^{3b} http://www.regjeringen.no/upload/KD/Vedlegg/Rapporter/Skulenedlegelser%202007_2010.pdf

⁴ <http://www.ssb.no/emner/04/02/20/utgrs/tab-2010-04-28-01.html> (SSB = Statistics Norway)

⁵ <http://www.ssb.no/emner/04/02/20/utgrs/tab-2010-04-28-04.html>

1.2.2 Day care organisation

Norway and the other Scandinavian countries are known for a good economic support to families with small children. Employed women get their normal wages paid by the government for 10 months after giving birth, and it is thus quite common to stay at home with the child in the first year. Non-employed women receive a grant of about 4400 € after giving birth. This amount is very small as compared to the support that most employed women receive.

Very much public funding has been used the last years to achieve a political goal that most political parties agree to, that there shall be enough places in kindergartens for all children whose parents demand this. Since January 1, 2009, all children are by law granted a place in a kindergarten if they have achieved the age of 1 year before the date of August 1 in the year when it was applied for a place. Since 2006, there has also been a maximum price level of about 290 Euro (2330 NOK) per child and month. The maximum price is regulated by the price index.

Many kindergartens serve warm meals in addition to the packed food that the children bring themselves, and all kindergartens serve milk and fruit. Extra money must be paid for the food served in the kindergarten.

When the children start school, they may visit a before- and after-school care, commonly located in the school building and open e.g. from 07:00 to 17:00, also in school holidays. It is common to prepare and serve some food (sandwiches or simple warm dishes) during before- and after-school care hours, but this varies a lot from school to school and must be paid for. Children from classes 1-4 may attain this care system; for children with special requirements even up to class 7. The municipality is imposed to offer a before- and after school care system, but it is not mandatory to offer the pupils any food during this care.

In total by May 2010 there were 6399⁶ kindergartens in Norway, and about half of these (2945) were owned by municipalities. The others are either categorised as private (2474), run as cooperatives with public support (called “family kindergartens”, 928) or owned by enterprises (90). The reason for the sum of kindergartens in each category being 6437 and not 6399 is probably that it is difficult to keep updated records of so many institutions.

1.3 Regulatory framework

In Norway in 2010, the typical school meal is a packed lunch that the pupils bring with them from home, and consume in the class room. In addition, there are subscription schemes for milk (starting in the early 1970s) and fruit and vegetables (starting around 1995). The subscription scheme for milk is subsidized by the main Norwegian dairy (Tine), administrated by the boards of parents assisted by the schools, and paid by the parents. The subscription scheme for fruit and vegetables (FV) is subsidized by the public, administrated by the schools, and the main costs are paid by the parents. However, since August 2007, the serving of FV has been paid by the government on all schools that include a lower secondary level (classes 8-10).

In upper secondary schools and some lower secondary and primary schools there are canteens where single food items, sandwiches, warm dishes etc may be purchased during lunch time. The canteens may be organised as enterprises run by the pupils (“elevbedrift”), or by school staff (e.g. cleaning personnel, assistants). More information about financing of the food and drinks served in school is found in chapter 2.

⁶ www.pedlex.no

1.3.1 The history of the Norwegian packed lunch - Why there are no warm meals in Norwegian schools

Around 1880, charity kitchens (“suppekjøkken”) offered warm meals to poor school pupils outside the school setting in Oslo. In 1895, the municipality took over this service, and offered free, warm meals to poor children in school, whereas more wealthy children were offered to buy the same food at a cheap price⁷. In 1897, the second largest town in Norway, Bergen started the same public service, so that poor families could apply for free, daily warm meals in school for their children⁸. The system of means-tested, warm school meals continued until ca 1935, and might have been developed to a warm lunch meal for all pupils in Norway as in other European countries, if it had not been for the strong efforts of some enthusiastic food-and-health pioneers. Ms. Henriette Schønberg-Erken (1866-1953) worked to inform people about the importance of food and household; she established a vocational school in cooking in 1908, wrote textbooks in cooking that are still famous, and she cooperated with the school chief physician (“skoleoverlege”) in Oslo, Carl Schiøtz. Schiøtz entered his position in 1918, and he was not at all happy with the food that the children were offered in school⁹. He criticised it for being constructed for a rapid and in-human food intake, and argued that the long-boiled food was like gruel (“velling”, thin porridge). The cooking filled the schools with unhealthy odours. Schiøtz argued that it was important for children to chew the food items, and learn how to behave properly during a meal (take off coats, relax, talk and listen etc). He also argued that boiling destroyed the food quality. Hence, he introduced the “Oslo breakfast”, which was comprised of whole-grain biscuits and whole-grain bread with margarine and cheese, 0.5 litre of fresh milk, and to complete the meal, a piece of raw vegetable or fruit (carrot, apple, orange, banana). Later, a spoon of cod-liver oil was added to the meal in winter months. The breakfast term refers to that the breakfast was served before the education started in the morning⁷, to increase the learning ability of the children.

The teachers in the first school in which this meal was introduced complained about the time that was demanded for the meal (because of the chewing!), and that the children were annoyed by the hard “work”. However, they experienced that this was initial difficulties, and the ultimate criteria for success was that the skinny children increased their weight much more efficiently with this meal system than with the old, warm meals⁹. In 100 years, the situation has indeed changed in most European countries!

From 1935, all schools in Oslo offered the “Oslo-breakfast” to all pupils (Bjelland, 2007), and other cities such as Bergen also changed their warm meals and adapted the Oslo-breakfast⁸. However, many Norwegian municipalities were too poor to offer free meals. In 1936, another enthusiastic medical doctor wrote a famous pamphlet about the “Sigdal breakfast”, naming it after his rural district. The idea of the Sigdal breakfast was that the pupils should bring the ingredients for the Oslo breakfast with them to school. The Sigdal breakfast concept rapidly diffused into the society, and was transformed to the well-known Norwegian packed lunch (Døving 1999). This packed lunch (“matpakke”) has become such a well-established tradition that Norwegians tend to believe that a cold meal for lunch is the only natural thing, and that eating something warm for lunch (in addition to a warm dinner) would be fattening and unhealthy.

The school meals was rather restricted during the 2nd world war (1940-45 in Norway), but afterwards the school breakfast had a renaissance. However, as the wealth increased among people, it was agreed that the money used for food in schools would be better utilised e.g. for school buildings, and the meals gradually disappeared. In Bergen, school breakfast was offered until 1954, and by then, about 30 % of the pupils received the meals⁸. In Oslo, the schools changed to the Sigdal breakfast system in 1963; the pupils then brought their own sandwiches, but the school organised serving of milk and raw

⁷ <http://www.byarkivet.oslo.kommune.no/OBA/Mat/oslofrokost.asp>

⁸ http://www.oppslagsverket.no/byarkiv/byarkivet.jsp?URL=%20/servlet/byarkiv.VisTemaord%3Ftemaord_id%3D323

⁹ <http://www.byarkivet.oslo.kommune.no/OBA/tobias/tobiasartikler/t4967.htm>

vegetables. In 1980, the system with free milk and vegetables in the primary schools disappeared even in Oslo (Bugge 2007).

A study describing the eating habits of Norwegian youth during school hours (classes 8-10) does not support the introduction of a warm school lunch (Bugge 2007). The packed sandwich lunch brought from home was generally considered as pleasant and healthy. When asked about alternatives to the packed lunch, bread served in school to be prepared with spreads during the meal, or ready-made bread dishes like baguettes, were equally popular as warm dishes with meat or fish. When asked about ways to improve the school meal, many asked for a refrigerator to keep the food cool, a nice place to consume it and more time for eating. In recent years, many food items are developed that combine bread, vegetables and cheese, meat or fish such as baguettes, wraps and pasta salads. Such simple dishes are popular among youth, and are often available in school canteens or nearby shops as an alternative for those buying their school food instead of bringing it from home. School milk was not frequently consumed; only 5 % of the respondents (Bugge 2007) had milk in school regularly. Tap water, consumed from a private bottle, was the most common drink. The school fruit scheme was not much more popular than the milk scheme; around 12 % of the respondents subscribed to a daily fruit in school. The pupils complained about low fruit quality and high price.

1.3.2 Legislation

1.3.2.1 Public regulations

The education and infrastructure that the Norwegian schools are imposed to offer the pupils, the rights of the pupils with respect to evaluation, etc., are governed by the public regulation “Opplæringslova” (The law of education¹⁰) and the public guidelines linked to this regulation¹¹. None of these documents mention school meals or food, not even in the before-and after school care, which all municipalities are imposed to offer (Opplæringslova § 13-7). However, in § 9a, “The school environment of the pupils” it is stated that all pupils have the right to a good physical and psycho-social environment which is promoting their health, well-being and learning capacity (in Norwegian: “Alle elever i grunnskolar og vidaregåande skolar har rett til eit godt fysisk og psykososialt miljø som fremjar helse, trivsel og læring”).

The Directorate for Health and Social affairs (SHdir) administrates and interprets social and health care legislation on behalf of the Ministry of Health and Care Services and the Ministry of Labour and Social Inclusion. The SHdir mentions the legislation referred above as one of two points of reference for the Norwegian school meal system¹².

The other relevant point of reference to legislation for Norwegian school meals is found in “Forskrift om miljørettet helsevern i barnehager og skoler m.v.” (Regulation for environmentally adapted health care in day-care centres and schools etc.) of December 1st, 1995¹³. This regulation describes that the environment must be organised to ensure that the children are able to have meals: § 11. *Meals (“Måltid”). Appropriate possibilities for feeding shall be found, which also protect the social function of the meal. The enterprise shall possess of sufficient infrastructure for storing, preparing and serving the food as required by the public regulations about food articles, as required for the extent of the food serving.* (“Det skal finnes egnede muligheter for bespising som også ivaretar måltidets sosiale funksjoner. Virksomheten skal i nødvendig utstrekning ha tilfredsstillende muligheter for lagring, tilberedning og servering av mat i samsvar med næringsmiddelovgivningen”).

Based on this law, the SHdir has prepared guidelines for school meals (Appendix 1), and guidelines for meals and food served in day-care centres (Appendix 2), see below. To advocate the importance of

¹⁰ <http://www.lovdatab.no/all/nl-19980717-061.html>

¹¹ http://www.regjeringen.no/upload/kilde/kd/reg/2006/0034/ddd/pdfv/284963-ny_forskr_til_oppl.pdf

¹² http://www.shdir.no/vp/multimedia/archive/00006/Resultater_fra_skolem_6581a.doc

¹³ <http://www.lovdatab.no/cgi-wift/ldles?doc=/sf/sf/sf-19951201-0928.html>

appropriate meals in schools and day-care centres, the National Council of Nutrition is active; see below.

1.3.2.2 Public guidelines for schools and day-care centres

In their guidelines to school meals (common for primary, lower secondary and upper secondary school), the SHdir emphasises that the school meal is a central element to create a good environment for learning and well-being, and further that the meals influence the pupils' health (short- and long-term). Their basic position is that the pupils are expected to bring their own packed lunch to school, but that all should be offered milk and fruit/vegetables, and that those who do not bring their own food must be served some. It is not specified how this serving should be arranged. Whole time access to cold drinking water is mentioned. Sufficient time must be used for the meals, at least 20 minutes, and an adult should be present during the eating at least in classes 1-4. Food should be available for sale in lower secondary schools. Food served or sold at school should be healthy and contain little sugar and fat; recommended is whole-grain bread, water, fat reduced milk, fruit and vegetables ("five per day"). Soft drinks, chips, snacks and sweets should be avoided, and cakes etc. should not be served daily. Lower secondary schools should organise a canteen or booth where the pupils can purchase food. The guidelines should be regarded as a standard for school owners and school administration (managers).

In the guidelines for day-care centres, the SHdir emphasises that for small children, a significant proportion of the total intake of food and drinks occurs in the day-care institution. Either this food is brought by the children or served by the institution. Hence, even if the parents are responsible for the children's diet, the large influence of the day-care centre on the children's eating habits, diet and health must be considered. Also here, the public authority strives for less fat and sugar, more fruit and vegetables and whole-grain bread. Eating periods should be two per day and last for at least 30 minutes. More details are found in Appendix 2.

1.3.3 Certification of organic food

For the protection of consumers, certification with labelling is required to distinguish non-organic food from organic. In Norway, the Norwegian Food Safety Authority (NFSA, Mattilsynet) is responsible for the certification of production, processing and distribution of organic food. NFSA has delegated the task of inspection to the former responsible certification body Debio, which was established in 1986. The agreement with NFSA authorizes Debio to make individual decisions on the certification and invalidation of operators. Debio performs annual inspections to ensure that farms and fish farms (primary producers), processing and marketing enterprises and importers follow the regulations for organic production. By the EEA agreement, Norway is subject to EU regulations for organic production even if Norway is not member of the EU.

In addition to fixed annual inspections, Debio's inspectors also perform unannounced inspections. At the end of 2009, a total of 2851 farms and 803 operators within food processing, import and distribution were registered in Debio's inspection scheme¹⁴. In addition to the public-law regulations for organic production, Debio has its separate private-law regulations for organic aquaculture, textile production, forestry, wild products and farm inputs.

Debio is a private, non-profit association based on membership of organisations representing production, processing/marketing and import. Debio is accredited by Norwegian Accreditation according to the quality standard ISO 65/EN 45011, and by the International Federation of Organic Agriculture Movements (IFOAM). The main office is located in Bjørkelangen, about 60 km east of Oslo. Debio has about 40 employees, of which about 25 work at the main office. The others are primary production inspectors, who usually are based in the region in which inspections are performed.

Debio is the owner of the Ø-label (Fig. 2) and other registered labels for production and marketing certified by Debio. To achieve the Ø-label certification, the applying

¹⁴ http://www.debio.no/upl/statistikkhefte_2009.pdf

producer/processor/marketer/importer must work in accordance with the minimum requirements in the statutory provisions for organic production and marketing. The Ø-label may be applied to imported products that are certified by an accredited body in the country of origin, in accordance with the national regulations for organic production in that country.



Figure 2. The Norwegian label for certified organic production, owned and administrated by Debio. Similar to the Danish Ø label, the letter Ø symbolises the Norwegian word Økologisk = Ecological (organic).

Serving outlets may apply to become affiliated to the Debio certification system, and thereby utilise the Ø label in the marketing of their service and products. They can choose between a permanent affiliation period and a temporary (e.g. music festivals). During permanent affiliation, 5 % of non-organic ingredients are allowed in an organic meal. If organic products are not available, meals may be offered as partly organic, e.g. “Meatballs with organic potatoes”, or the menu may show that “this canteen uses organic milk and potatoes”.

In 2009, 127 enterprises were certified for serving meals, mostly hotels and restaurants¹⁴. The number has increased significantly in recent years.

1.4 The context in which (organic) school meals are discussed and organised

1.4.1 Important promoters of organic food and school meals

1.4.1.1 The National Council of Nutrition

The National Council of Nutrition, NCN (Statens ernæringsråd; in 1998-2003 Statens råd for ernæring og fysisk aktivitet 1998-2003; since 2003 Nasjonalt råd for ernæring) has been actively promoting a high-quality school meal since they were first established in 1946. A major goal for the council is to promote the nutritional situation for the Norwegian population. The NCN is an organ for competence and administration under the Ministry for Health and Care Services in issues related to nutrition, health and during 1998-2003, physical activity. The Ministry appoints 15 experts to the council each 4th year, and the council is financed by the SHdir. In 2006, NCN launched a strategy plan which is also available in English, “A healthy diet for good health”¹⁵. The primary focus is to reduce the consumption of solid fats, sugar and energy-dense, nutrient-poor foods, while increasing the consumption of fruits and vegetables. Four areas of high-priority have been identified: Actions to encourage healthy choices, *actions in educational institutions*, actions in the health service sector, actions to enhance knowledge through monitoring and research, and information and communication.

The free fruit serving at schools with classes 8-10 initiated in August 2007 was supported by the NCN, which expressed its dissatisfaction¹⁶ when the government did not proceed to offer free fruit to more classes in 2009, and also in that year took away the funding for free fruit for all pupils in a few

¹⁵ http://www.shdir.no/vp/multimedia/archive/00007/IS-1259_Engelsk_7033a.pdf

¹⁶ http://www.helsedirektoratet.no/ernaeringsraadet/meninger/skuffet_over_manglende_skolefrukt_satsing_259434

selected areas where there was a special demand for levelling social equity, which was introduced in 2007.

Checked in May 2010, the NCN has prioritized other areas than school meals in the time period of the iPOPY project (2007-2010). E.g. the recently launched proposal for guidelines for eating and physical activity to promote public health does not include the term school food (“skolemat”)¹⁷.

As the National Council of Nutrition is closely related to the SHdir, the SHdir as such has not been further described here.

1.4.1.2 The Ministry of Education and Research and the Social Left party

The Ministry of Education and Research has been governed by the Socialist Left (SV) party since the elections in 2005. This party heavily emphasised the introduction of a free, complete school meal for all pupils in their elections campaign, and estimated the costs to be about 250 million Euro (2 billion NOK) per year¹⁸, based on (food) costs of about 2.5 Euro per meal. The arguments in favour of a free school meal were that this is the normal practice in our neighbour countries Sweden and Finland, and that it will facilitate the learning process in school. The SV party developed the slogan “Læring - ikke bare ernæring” (learning - not only nutrition) to illustrate their viewpoint. In recent years, the length of the school days has increased. The average number of educational lessons per pupil per year in the primary and secondary lower schools (grades 1-10) in Norway increased from 720 in 2001-2002 to 774 in 2008-09¹⁹ and this development will probably continue. Many children stay in the school setting (before- and after- school care included) for 8 hours or more. Long residence in school environment makes free and proper school meals more relevant. Further, the eating pattern of children and youth is not satisfactory; they tend to eat too much chips, snacks and sugar-rich soft drinks, and too little fruit, vegetables, fish and whole grain bread.

In spite of ambitious, and much debated aims during the campaign; in the government inaugural address the ambitious goal was compromised to introduce an arrangement with fruit and vegetables in the schools, and prepare for experiments with school meals (“ Innføre en ordning med frukt og grønt i skolen og legge til rette for forsøksordninger med skolemat”)²⁰.

Shortly after the election in 2005, the Ministry appointed a working group to elucidate the state of art for Norwegian school meals, and suggest ways to organise school meals that will contribute to more efficient learning, better health and diminishing social inequalities. The group was lead by professor in nutrition, Dr. Knut-Inge Klepp. The report was launched in 2007²¹, proposing that fruit and vegetables should be served for free in all Norwegian schools because that would increase the fruit intake among pupils from all social classes. They also suggest that the milk serving in school should be paid by the public, and to introduce test serving of bread-based school meals in the lower secondary schools, thereafter also in the primary schools.

When the schools started after summer holidays in August 2007, all pupils in schools with a lower secondary level (classes 8-10) were supposed to receive a free fruit daily. The government transferred money to the municipalities corresponding to the number of pupils; 0.48 Euro per pupil per day (3.85 NOK)²². Further details of the school fruit scheme are discussed in chapter 3. There was some resistance towards the implementation, and some municipalities used (part of) the fruit money for other purposes²³. As a start towards free fruit for all pupils, certain parts of the country with special demands for increased social equality provided free fruit for all pupils. This offer comprised about 20

¹⁷ http://www.helsedirektoratet.no/ernaeringsraadet/nye_kostr_d_utkast_til_rapport_lagt_frem_713494

¹⁸ <http://www.dagbladet.no/nyheter/2005/08/26/441527.html>

¹⁹

<http://www.utdanningsdirektoratet.no/upload/Statistikk/Presentasjon%20av%20GSI%202008%202009%20forel%203%20B8pige%20till%20til%20.pdf>

²⁰ <http://www.regjeringen.no/upload/kilde/smk/rap/2005/0001/ddd/pdfv/260512-regjeringsplattform.pdf>, p. 47

²¹ http://www.regjeringen.no/upload/kilde/kd/rap/2006/0008/ddd/pdfv/284882-skolemaltid_26.06.06.pdf

²² http://www.regjeringen.no/nb/dep/kd/dok/andre/brev/utvalgte_brev/2007/Informasjonskriv-om-innforing-av-gratis-.html?id=475936

²³ http://www.nrk.no/nyheter/distrikt/more_og_romsdal/1.6594231

000 pupils, but only lasted for two years. The cost for the municipalities were estimated to 72 mill Euro (217 mill NOK) for 2009²⁴.

Partly due to the local resistance to the free school fruit scheme, the government in June 2008 made it compulsory for the schools to offer free fruit²⁵, by amending the law of education¹⁰. The owner of the school (= the municipality) is obliged to provide free fruit and vegetables for the pupils. The Ministry may launch further decisions (in the form of public guidelines) about the responsibility of the scheme and the extent of the task (“§ 13-5. *Plikt for skoleeigaren til å ha ei ordning med gratis frukt og grønnsaker*. Skoleeigaren skal gi elevane gratis frukt og grønnsaker. Departementet kan gi nærmare forskrifter om ansvaret for ordninga og omfanget av plikta.”). The public guidelines so far developed state that the school every school day shall provide free fruit and vegetables for all pupils at lower secondary schools and combined schools. (“Skolen skal kvar skoledag gi alle elevar ved ungdomsskolar og kombinerte skolar gratis frukt og grønnsaker”).

In spite of positive experiences at the schools where the fruit was served for free; instead of expanding the free fruit arrangement, the free fruit for all pupils in the certain areas was removed from August 2009²⁶. Further, a small funding of 2,5 mill Euro per year in the period 2007-2008 to test free school meal systems was not prolonged. The scheme of free fruit for all pupils at schools with a lower secondary level (class 8-10) is prolonged and seems to have become well established.

After the elections in 2009, the leader of the Socialist Left party Ms. Kristin Halvorsen took over as Minister of Education, being the Minister of Finance in the previous government. This reflects the priority that this party gives to the school sector. However, the ambitions to introduce free school food seem to have vanished with time. A search for “skolemat” (school food) at the home page of the ministry by June 2010 does not reveal any hit since 2007, except a reference to the evaluation of a few test schools with extended school days where meals were served²⁷. The current main area of interest for the Minister seems to be the large amount of pupils not fulfilling the upper secondary school.

For several years, it has attained large attention that Norwegian pupils are not performing well in international tests of knowledge and skills, e.g. PISA tests. Especially the boys perform poorly in reading and other skills. It is argued that removing structural elements like traditional classes, one contact teacher per pupil being the only fixed structure in some schools, and putting more responsibility on the pupil for his or her own learning, is not well adapted to the behaviour of young boys. Norwegian pupils are behind other Nordic countries, especially Finland, in mathematics and natural science. At the same time the pupils complain about noisy classrooms and that it is hard to concentrate on learning. These topics have received much attention in the Norwegian public debate related to the school sector the last few years.

1.4.1.3 A public goal for organic consumption

Since 1999, Norway has had a public aim for organic production. The first goal was a share of 10% organic farmland by 2010²⁸, provided that the consumers’ demand would continue to increase. Upon the elections in 2005, the red-green government strengthened the goal notably, but concurrently postponed it, by stating that 15% of the Norwegian food production *and consumption* should be organic by 2015²⁰. National aims for organic consumption are much less common than goals for production. A committee representing many Ministries was appointed in 2006 to make strategies on how the public

²⁴ <http://www.skolefrukt.no/vedlegg/Belop-til-kommune-2010.pdf>

²⁵ <http://www.skolefrukt.no/vedlegg/Lov-om-endringer-i-opplaeringsloven-og-privatskoleloven.pdf>

²⁶ <http://www.nrk.no/nyheter/distrikt/ostafjells/buskerud/1.6266109>

²⁷ <http://www.regjeringen.no/nb/dep/kd/sok.html?quicksearch=skolemat>

²⁸ <http://www.regjeringen.no/nb/dep/lmd/dok/regpubl/stmeld/19992000/stmeld-nr-19-1999-2000-5/9.html?id=321628>

could contribute to the goal of 15 % organic consumption²⁹. However, the committee never completed its task and in practice, the Ministry of Agriculture and Food has been quite lonely to follow up on this ambitious goal. In January 2009, a revised action plan for organic food and farming was launched, confirming the goal of 15 % organic production and consumption by 2015³². However, upon the re-election of the red-green government in September 2009, the time to reach these goals was postponed to 2020³⁰.

By January 2010, 5.6 % of the Norwegian farmland was organic certified (including land in conversion)¹⁴. Only 1.2 % of the total food sales were organic in 2009, and the number was the same in 2008. Total sales of organic food in Norway comprised 124.3 million Euro (994.6 million NOK) in 2009³¹. The action plan for organic food and farming³² defines the goal for consumption. Norwegian and imported food may be used to achieve the goal, but Norwegian products should be emphasised for those items that we have appropriate conditions to produce nationally. The consumption of food and drinks should be measured for products where non-organic alternatives are available, by the value of the products in NOK.

The development may seem slow, and the goal of 10% organic farmland by 2010 is not reached. Many also doubt that the 15% goal by 2020 is realistic. Still, the public goals have an important function as a reference for those working to increase the share of organic products in any food serving arena. Gradually, the goal is more acknowledged and large public actors take actions to contribute to reach it. Looking five years back, we can see that organic production and consumption has increased in Norway, but it is definitely a very long way to go to reach even (only) the 15 % goal. By 2009, the average Norwegian used only 11 % of his/her income for food³³, which is much less than e.g. for transport (17 %). In spite of this, premium prices on organic food still hamper the dissemination. Possibly because we buy food quite often, people tend to overestimate by 100 % or more the share of their income they believe to use for food and drinks³⁴. This may also impact the perception of the premium prices.

1.4.1.4 Oikos

In Norway, the main political actor to promote the consumption of organic food is the organisation Oikos - Organic Norway. Oikos was founded in September 2000, when three organic organisations merged into one. The aim was to establish one organic movement and strengthen the organic voice in the Norwegian landscape of politics, economics and social life. Oikos, as well as the Biodynamic Association in Norway, represent both organic producers and consumers. The two organisations cooperate closely, and the Biodynamic Association via their sub-group Demeter Norway is represented in the Oikos National Board. By January 2010, Oikos had 1840 members, which is a small increase since 2007 (1800 members). Oikos has eight regional groups, working voluntarily in close contact to county authorities and other stakeholders in the region. On the local level, 25-30 local groups are active. The main office is located in Oslo, and about eight people are employed in projects, as magazine editors and administrative staff. Oikos is a non-profit, idealistic organisation and member of the IFOAM (International Federation of Organic Agriculture Movements). Oikos runs projects in addition to political lobbying and meetings with stakeholders in the food-sector and the agricultural sector. The main project activities are to increase the visibility of organic food in food stores, and to facilitate the use of organic food at festivals. Oikos has not worked much to introduce organic food in schools (yet), whereas their Danish sister organisation "Organic Denmark" has a significant activity in that field.

²⁹ <https://www.slf.dep.no/no/miljo-og-okologisk/okologisk-landbruk/handlingsplaner/publikasjoner>

³⁰ <http://arbeiderpartiet.no/Politikken/Politisk-plattform-2009-13> , page 22

³¹ <http://www.slf.dep.no/iKnowBase/Content/12878/SLFS%20ØKOLOGISK%20RAPPORT%202009.PDF>

³²

http://www.regjeringen.no/upload/LMD/Vedlegg/Brosjyrer_veiledere_rapporter/Handlingsplan_okologisk_200109.pdf

³³ <http://www.ssb.no/forbruk/>

³⁴ <http://kslmatmerk.no/nyhet/vetikkehvamatenkoster>

1.4.1.5 *Involvement from the parents*

Norway has a high share of employed women. Even so, the women are commonly the most active in the households to perform the food shopping, and decide about the family's menu. Traditionally, Norwegian families eat one warm meal per day, a dinner with potatoes, meat or fish and boiled vegetables or salad, around 5 pm when the parents have completed their work. New, more convenient food items like frozen pizza is changing the picture of what kind of food is common to eat for dinner, but for most families it is considered as very important to sit together around the dinner table, preferably every day.

All Norwegian primary and lower secondary schools have parents' boards ("foreldrenes arbeidsutvalg", FAU), and in some municipalities these boards are cooperating in a municipal board. From these boards, parents are appointed by the Ministry of Education to The National Parents' Committee for Primary and Lower Secondary Education (Foreldreutvalget for grunnskolen - FUG). FUG has not been working very actively with school meals. No statements about school meals were found on their web site on November 20, 2007, but in an e-mail from FUG senior advisor Randi H. Jørgensen, November 28 2007 it was explained that FUG was active in the board producing the report about school food²¹. When the leader of FUG, Loveleen Brenna, has expressed herself about school meals, she has emphasised that FUG is positive to all efforts that foster the health and well-being of the pupils, and may increase their ability to perform well in school. Further, she argues that efforts such as school meals should be financed by the public, and that large individual differences in school meal systems between schools and municipalities should be avoided.

When searching for "skolemat" at the FUG website in May 2010, the single hit that is shown refers to positive experiences with school meals achieved in some test municipalities during 2007³⁵, see also²⁷. Here, the school meal was introduced as a part of a test with extended school days. This report describes that the introduction of a free school meal was demanding, but very positive for the school environment. The authors emphasise that the popularity of school meals among the responsible persons at school was linked to how much they understood the understanding of the school as a place for the whole pupil, not only the pupil's head. Those schools where the whole pupil (head and body) was focussed in the school culture were positive towards school meals because it increased the quality of the learning environment, whereas more "body- distant" schools ("kroppsfjerne") considered that the meals took away too much time that should have been used for education.

The organisation "Skolematens venner" ("Friends of the school meal") is working very actively to promote school meals. The organisation is a private foundation, where enterprises and others may support by paying membership fees. The vision of the organisation is, by means of their competence, to reduce future social problems and diseases related to lifestyle, by advocating for the implementation of a free, warm and nutritionally correct lunch meal in Norwegian primary and lower secondary schools. The overall goal is to increase the understanding of the importance of a good nutrition for children and youth. On their web site, several experiments with school meals throughout Norway are described. A special case is the first school restaurant in Norway³⁶, Hundstund lower secondary school close to Oslo, where a professional cook is employed to serve a daily warm and healthy lunch for 4.5 Euro per day (35 NOK). More in chapter 3.

1.4.2 *Overweight and obesity*

With increasing wealth and less physical work/activity in industrialised countries, people tend to increase in weight. Overweight and obesity occurs already during childhood, and the amount of overweight and obese children is increasing in Norway as in other European countries. A thorough study, "Cost of the youth" ("Ungkost") was conducted in 2000, and showed that 18.5 % of Norwegian children aged 8-9 years were overweight, and 3.6% were obese (Andersen et al, 2005). These numbers were significantly higher than about 10 years ago. A local study in Bergen (Júlíusson et al, 2007) showed that three times as many children were obese in 2003-06 as compared to 1974-46; 17.2 % of

³⁵ http://www.utdanningsdirektoratet.no/upload/Rapporter/2008/Sluttrapport_Utvidet_skoledag.pdf

³⁶ <http://www.vg.no/nyheter/innenriks/elevavisen/artikkel.php?artid=528952>

children aged 7-11 were overweight or obese in 2003-06. In Oslo in 2004, 21% of 8 and 12 year old children were overweight or obese (Vilimas et al, 2005); the numbers varied significantly between districts. A new national study (Helsedirektoratet (SHdir), 2008) showed somewhat lower numbers, with 14 % of 9 year old children being overweight and 4 % obese. Among 15 year old youths, 10 % were overweight and 5.2 % obese. In Telemark county, Oellingrath et al (2008) found comparable results, with 16 % of the pupils in class 4 being overweight and 4 % obese.

Increasing weight among children may be associated with increasing school day lengths, more frequent transport to school instead of walking and less physical activity in daily life due to more time used for PC and TV. Further, the diet is composed of food being too concentrated in fat and energy. School meals may contribute to feed the pupils in a more appropriate way, and to learn better eating patterns. However, in Norway the overweight problem has not been much linked to school meals in public debate or policy development. A google search for the keywords “skolemat overvekt” (school food overweight) gave about 2500 hits, mostly to private opinions, blogs etc., whereas a search for “fysisk aktivitet overvekt skole” (physical activity overweight school) gave 23 000 hits. The first hit came from a public body (the SHdir), and there were several references to scientific studies etc. Hence, the focus in Norway on overweight among children seems to be directed more towards physical activity than nutrition.

1.4.3 Food on the school plates - practical hindrances

1.4.3.1 Hindrances on school level

Whereas the Socialist Left party has been the one to argue for school meals, the Conservative party has been negative. In 2009, they asked 571 teachers about their opinions with respect to free school food. Only a third of them considered free food as quite or very important³⁷, and the party leader said that meals would be stealing time from education and create a lot of mess and waste in the schools. School leaders interviewed when the free fruit scheme was introduced stated that they would prefer the money to other purposes, e.g. excursions for the pupils, which they could not afford³⁸. School meals are not a matter people generally agree about. Many teachers are tired of reforms being forced on to them and want to concentrate on their original task- teaching knowledge. One teacher followed up in a web debate about the paper referred as³⁷ by describing a test with school meals with very bad experiences. The children became so excited by the food that they did not calm down afterwards, and the food caused a lot of farting. The whole project was described as a “pure hell”.

Another example of negative attitudes, in this case among politicians and bureaucrats, is a recent case from the municipality of Marker, close to Sweden in the county of Østfold³⁹. Inspired by their Swedish neighbors who receive a free, warm school meal daily the pupils in Marker asked for school meals to be introduced. The headmaster took this seriously and produced a report where the costs were calculated, and actions to introduce the meals were taken such as finding an appropriate dining hall, and making an initial agreement with the municipal kitchen to produce the food. The largest costs were linked to the extra work needed to pay school staff for more working hours, because the lunch break had to be extended. A free, warm meal for all 450 pupils would cost about 0.4 million Euro per year (3.2 mill NOK). With 190 school days, this would imply a cost of about 4.7 Euro (37 NOK) per pupil per day. According to the local newspaper, the board of education (politicians) in Marker was not interested in discussing the report when it was presented to them on May 31, 2010. They agreed without any debate to the recommendation of the municipal manager to reject the proposal of introducing a school meal in Marker. The municipal manager argued that the positive effects of a school meal would be small because almost all pupils in Marker bring a packed lunch, and the negative effects of a changed and longer school day would offset any positive effects.

³⁷ <http://www.vg.no/nyheter/innenriks/valg-2009/artikkel.php?artid=567979>

³⁸ <http://www.nrk.no/nyheter/distrikt/sorlandet/1.3991244>

³⁹ <http://www.smaalenene.no/nyheter/article3977682.ece>

These examples demonstrate that stakeholders wanting to introduce a school meal system in any Norwegian municipality or single school should be prepared to face many challenges. There are no regulations prohibiting the sales of food in Norwegian schools, but several other hindrances. The foremost problem is the costs, especially related to personnel required to administrate and serve the meals, and that the school usually lacks the infrastructure required to store, prepare and serve the food, clean the plates etc or handle the waste from disposable eating utensils. Several stakeholders think that more public money for the school sector can be better utilised for other purpose than school meals. Many also argue that feeding children is a task for the parents, not the public.

In practice, a bottom-up initiative on a single school would have to work through the FAU, and ally with one or more engaged teachers (or possibly the headmaster) who is positive to the idea, open to discuss practical arrangements and prepared to devote some work time for this. Top-down initiated projects where some public funding has been given to pay for the food and the work linked to serve cold meals in school (“make your own sandwiches at school”-meals) have proven very successful. They have been popular among the children, the teachers experienced better learning ability etc. Some examples are presented in chapter 4, and more are mentioned in the report about school meal tests²¹. However, few if any municipalities have earmarked funds for school meals in their school budgets. One probable explanation for this may be that local politicians and administrators are waiting for the government to take actions and allocate money for this task. The introduction of free fruit on the schools with a lower secondary level since August 2007 is a step in that direction. After the free fruit arrangement was decided, there was a large concern that the free fruit serving might create problems of waste in school campuses because the pupils would not eat all fruit every day^{40, 41}. To avoid that fruit becomes a problem of waste, the schools may arrange the fruit serving e.g. such that the fruit is sliced and shared among all in the classroom, or served in the first break when many start to get hungry instead of in the lunch break.

1.4.3.2 Hindrances on delivery

Norway is a large, but scarcely populated country with high levels of income. Hence, transport is costly, and food delivery at all schools would be a significant cost.

If a school would go for warm, easy-to-prepare meals it is a problem in Norway that very few catering companies are specialised in delivering this. Some municipalities cooperate with institutional kitchens; more examples are shown in chapter 4.

Municipal purchase agreements may hamper the possibility to buy organic food, or to buy from distributors without an agreement. E.g. in the town Kristiansand, the municipality had a purchase agreement for fruit and vegetables with the largest fruit distributor in Norway, Bama, in 2007. Even if some schools in this municipality wanted organic fruit delivered to their schools, and Bama could not deliver more than one organic fruit per week (which was their strategy to contribute to the public goal of organic consumption), the schools were not allowed to choose a delivery from a 100% organic company. This shows the importance of being careful and emphasising organic food when designing municipal calls for tenders.

1.4.4 Important arguments in the debate about school meals - an overview

The main arguments in favour of a public school meal system seem to be:

- Social equalisation (e.g., families with low income generally eat less fruit)
- Young people should eat more fruit and vegetables and less fat and sugar, school meals should contribute to more healthy nutrition for the youth
- Longer school days, better school environment and increased learning capacity

⁴⁰ <http://www.nationen.no/mat/article2933066.ece>

⁴¹ <http://www.adressa.no/nyheter/sortrondelag/article912490.ece>

- The pupils can learn much from eating together around a table instead of at the individual desks in the class room
- Norway is a rich country; why should we not serve free meals in our schools when this is the normal thing in Sweden and Finland?

The main arguments against a public, free school meal system seem to be:

- Resources are more required to renovate buildings, buy new books etc
- A school meal would imply a longer school day, which is very costly due to extra working hours for school staff
- Food is a private responsibility
- A packed lunch is not necessarily less healthy or tasty than a warm meal or other food served at school
- The experiences with free school meals in other countries are not always positive. When prices are pressed, the result may be that the food served has a bad quality, so that the nutritional status of the pupils may in fact be worse than with packed lunch from home.

2 Factual description of school meals in Norway

2.1 Eating patterns among Norwegian pupils 1991-2000

An increasing number of schools, especially on the lower secondary level, have canteens where the pupils may eat their packed lunch and buy some food and drinks (Table 1). Upper secondary schools usually have canteens. The canteen staff may be people in need of a part-time work or work training, or people with additional work in the school such as cleaning staff. Pupils in need of more practical education may be included in food preparation and selling. The canteen may be managed on a daily or occasional basis by pupils and one responsible teacher as a part of the subject contracting (“entreprenørskap”), where the pupils establish and manage their own small enterprises (“Elevbedrift”). When the school has no canteen, the pupils eat their food in the class room.

The eating patterns of Norwegian pupils during the school day were studied in 1991, 1997 and 2000 in all Norwegian primary and lower secondary schools (Table 1). After 2000, such studies have not been done. The studied characteristics reflect the Norwegian guidelines for school meals (Appendix 1). As the data reveals, it has become very common that an adult guides the children, e.g. by reading aloud from a book, during the meal. More schools in 2000 than in 1991 ensured that at least 20 minutes were available for eating, especially in primary schools. However, this issue seems still to be a challenge for many schools; less than half the schools had more than 20 minutes available for classes 5-7 in 2000 and longer time for eating and having a nice meal at school was one of the main wishes of the youths in classes 8-10 interviewed by Bugge (2007). In addition to the data shown in Table 1, the national survey of school meals 2000 revealed that 4% of the lower secondary schools sold beverages. Only 36% of the schools reported to have easy access to cold drinking water.

Table 1. Lunch break and food consumed in primary and lower secondary schools in Norway in the years 1991, 1997 and 2000. Shares in %. From the national survey of school meals (“Nasjonal skolemåltidsundersøkelse⁴²”) based on data from all schools.

Pupils being accompanied by an adult (class 1-4)	1991	1997	2000
	64	81	93
At least 20 minutes available for eating			
Class 1- 4	25	37	51
Class 5- 7	25	32	38
Class 8- 10	43	53	61
Possibility to buy food items (class 8-10)	7	19	55
Packed lunch brought from home			
Class 1- 4	98	97	99
Class 5- 7	96	95	95
Class 8- 10	83	77	75
Fruit or vegetable brought from home			
Class 1- 4		33	26
Class 5- 7		27	20
Class 8- 10		17	13

⁴²

http://www.helsedirektoratet.no/ernaering/skole/skolepersonell/fakta_om_kostvaner_og_skolem_ltid_blant_barn_og_unge_37004

The survey demonstrates the stable and dominating position of the packed lunch, especially at the primary level (Table 1). Almost 100 % of the pupils in classes 1-7 bring their meals to the school. At the lower secondary level the pattern changes somewhat, but the packed lunch still has a strong position. Already in 1991, less pupils at the lower secondary level brought a packed lunch, and with time, less of these pupils bring their meals to the school. In 2000, only 75 % of the pupils did (Table 1), and in the study by Bugge (2007) only 69% of the respondents used to bring a packed lunch to school every day or almost every day. The same pattern is found for fruit and vegetables (FV) brought from home; less pupils bring this when they grow older. A lower frequency of brought FV in 2000 as compared to 1997 may be due to the school fruit scheme which was introduced in one county in 1995, and covered the whole country in 2004. The lower frequency of brought lunch (“matpakke”) and FV in lower secondary schools is reflected by a rapid increase in the availability of canteens, food booths or other ways of food purchase. Very few schools offered such solutions in 1991, whereas more than half had some food for sale by 2000. Further, pupils at this level are more often allowed to leave the school area during the lunch break, which makes it possible to buy food items e.g. in nearby shops.

When asked about what they would like the school canteens to offer, the respondents of the Bugge (2007) study primarily asked for cheaper and healthier food. Three out of four girls asked for more FV, and half of the girls for salads, whereas the boys were more concerned about price, and wanted more ready-made sandwiches. A possibility to make your own sandwich in the canteen was about as requested as warm dishes; about 50 % of all pupils said that this was important to them. However, the most requested changes were facilities to keep the food brought from home cold, a longer lunch break, and pleasant eating environments. Hence, the introduction of a public, free school meal is not much supported by a juvenile dissatisfaction with the packed lunch system, at least not at the lower secondary school level. Still, a public school meal for all may be important: Only half of the pupils in class 8 had lunch every day in 2000⁴³. 11 % of the boys and 15 % of the girls interviewed by Bugge (2007) reported that they did not eat anything during the school day.

The subscription scheme for milk, and subscription or daily delivery of free fruit and vegetables, are the first steps towards a public school meal in Norway, and will be further described in the next sections.

2.2 The school milk subscription service

Since about 1970, the dominating dairy company in Norway, Tine, has offered milk as a subscription service to primary and lower secondary schools all over the country. 99% of the schools participate in the service, and almost 60% of the pupils subscribe to some kind of milk variety (see below). School milk containers (0.25 litres) are brought to the school at least once per week by Tine, stored in a refrigerator, and brought to the class room by the class monitor of the week, who picks up the relevant milk containers. Tine offers altogether four milk varieties in school milk containers: Fat reduced milk 1.5% (fat), organic fat reduced milk 1.5% (restricted area), fat reduced milk 0.7% and fat reduced milk 0.7 % with chocolate. The chocolate milk is reduced in lactose and hence only 1 % sugar has been added to this drink.

Tine is not only a commercial company but also has a role to regulate the Norwegian milk market, e.g. they are obliged to deliver milk to competing dairies. Tine has an ambitious goal that 6 % of the total milk delivery should be organic by 2015⁴⁴. A premium price for organic milk has been granted for all dairy cow farmers since 2008, and by 2009, 2.6 % of the cow milk production was organic. The market has not developed very smoothly, and in 2009, only 49 % of delivered organic milk was sold as processed organic products³¹, as compared to 61 % in 2008. Organic school milk is less available in 2010

⁴³

http://www.helsedirektoratet.no/publikasjoner/rapporter/ungkost_2000_landsomfattende_kostholdsunders_kelse_blant_elever_i_4_og_8_klasse_i_norge_24140

⁴⁴ <http://www.tine.no/212370.cms>

as compared to 2007, when the iPOPY project was started. In 2007, two dairies tapped organic school milk and organic milk was offered in southern Norway (Rogaland, Agder) and in Mid-Norway. By 2010, organic milk in 0.25 litre containers is only tapped at Rørosmeieriet southeast of Trondheim. Organic school milk is offered in the whole region of Mid-Norway, distributed by the dairies at Høgset, Tunga and Namsos.

The prices for the school year 2007/08 were 0.33 Euro (2.62 NOK) per container for the conventional varieties and 0.39 (3.11 NOK) for the organic and the cocoa variety - a premium price of 19 %. By 2009/10, the prices had increased to 0.42 Euro (3.36 NOK) for conventional and 0.56 (4.70 NOK) for organic and cocoa school milk, a premium price of 40 %. By June, 2010 one litre of conventional milk 1.5 % fat in a grocer's shop typically cost 1.65 Euro (NOK 13.20) and one litre of organic costs 1.42 Euro (NOK 17.80). In that case, the premium price is 35 %. In the autumn of 2003, a differentiation was introduced in the scheme of price support for school milk, to achieve that the school milk should have an equal price irrespective of milk type. Since the autumn of 2007, price differentiation is again introduced, and additionally, the price is increased on all milk types. The organic and cocoa milk types are more expensive to produce, and hence these cost more for the pupils.

Asked about their policy towards organic school milk, senior consultant in Tine, Birgit Irgens explained in October 2007 that Tine is engaged to protect the environment, and acknowledges their responsibility as a large company to act responsibly. In 2001, the demand for organic milk increased rapidly, increasing sales of organic milk by 134%. Hence, Tine decided to offer organic school milk in areas where excess organic milk was available. The first test area was the county of Østfold, where a dairy was tapping organic milk. The aim of the test period was to increase the pupils' attention of organic milk, and to increase the total sales of organic milk. In the autumn of 2004, organic school milk received much attention because the NGO "Grønn Hverdag" and Oikos started a campaign that Tine should make organic milk available at all schools in Norway, not only in Østfold. After a few years the dairy in Østfold was closed, but other test areas were the county of Rogaland and the city Kristiansand in southern Norway, and the region of Mid-Norway. Tine stated in 2007 that they would increase the test areas when there was enough organic milk available. As shown by the decreasing share of organic milk sold as organic, there should be enough milk available to increase the school milk. However, the sales of organic school milk have dived in recent years (Fig. 3). In 2009, the total consumption of organic school milk was only 23 780 litres.

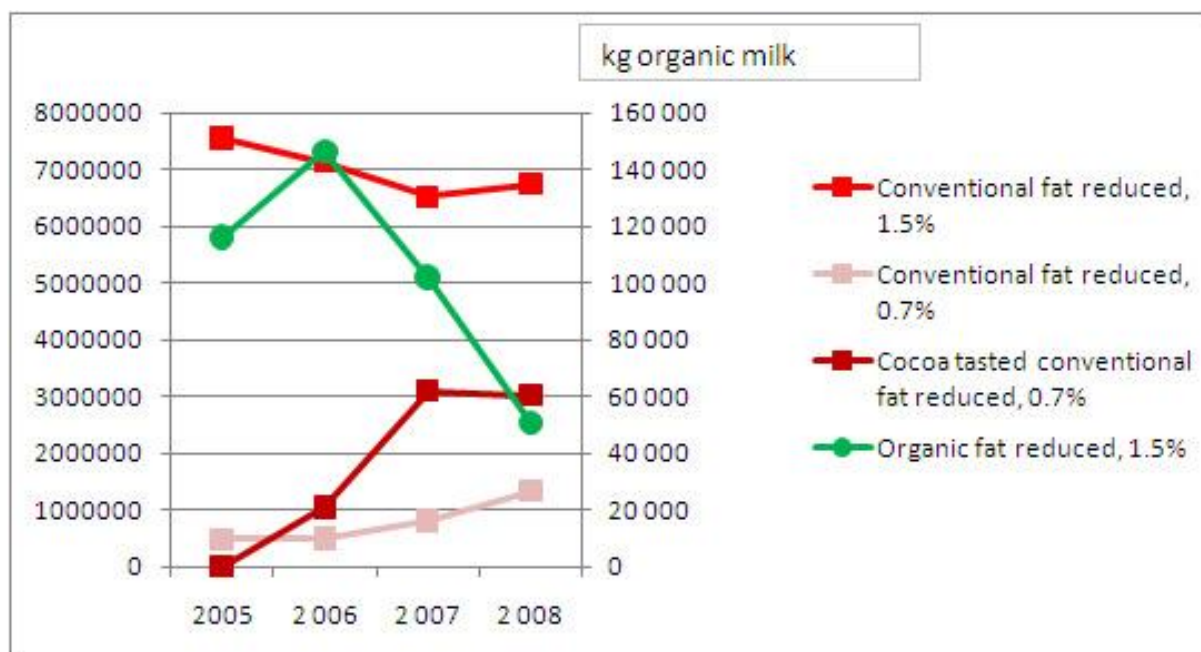


Figure 3. Sales of "school milk" (1/4 litre containers) during 2005-2008. Sales of three conventional milk types on the left y-axis, sales of organic milk on the right.

In addition to the rapid increase in the price of school milk and the significant premium price, schools tend to restrict the number of milk types they offer to simplify administration (Løes and Bårdsen 2009). Further, organic products are much less marketed, especially within the catering and public sector. Informants interviewed by Bårdsen in 2009 complained that Tine did not inform them about their organic assortment. Tine claims to heavily subsidize the school milk scheme, in spite of that the costs for the users are higher than for milk bought in shops. Large investments in refrigerators etc. are required to supply all schools and kindergartens with milk. The subsidies are paid by a purchase tax on milk that is administrated by Tine (cf. their role as a market regulator). One of their main reasons for Tine to support school milk is of course to establish loyal milk drinkers at an early age, and maintain the reputation of milk as a healthy product because it is recommended by the authorities as a part of the school meal. Obviously, these arguments are less important when it comes to organic school milk.

During the spring of 2010, Tine made a strategy to increase the sale of organic milk and fulfil the demand for organic school milk raised e.g. by several project leaders of “Organic lift” municipalities (see chapter 4.1). The company now plans to produce long-term durable, raspberry flavoured organic milk in ¼ litre containers. The strategy has received criticism among organic stakeholders, arguing that this product design does not fit to the image of organic food as natural, with favourably little processing and no additives.

2.3 The school fruit schemes

Since 1995, Norwegian primary and lower secondary schools have had the opportunity to subscribe to a daily delivery of fruit or vegetables (FV). The scheme is administrated by the Norwegian fruit and vegetables marketing board (“Opplysningskontoret for frukt og grønnsaker”), in cooperation with the Directory of Health and Social affairs (SHdir). The scheme is supported by public money, in total 17 mill. NOK (2.125 mill. Euro) in 2009. Subscribing families pay 0.31 Euro (2.50 NOK) per day, additionally the school receives a public support of 0.125 Euro (1 NOK) per day to cover the costs. The payment is conducted twice a year and calculated according to the number of days the school want to serve fruit. Some schools wait until the local fruit season is over before they start the subscription scheme, e.g. after the autumn holiday. In addition to the per-fruit -served support, all schools where at least 50 pupils, or more than 40% of the pupils subscribe to the scheme receive a refrigerator for storage without costs. The support reflects the public aim to increase the FV intake (“Five per day”). The FV offered are apples, pears, bananas, oranges, carrots, kiwi, clementines, nectarines and peaches. In 2004, public regulations were launched about school fruit (in Norwegian: “Forskrift om tilskudd til prisnedskrivning av frukt og grønnsaker i grunnskolen 2004”), and detailed criteria for the quality (size etc) have been developed for all relevant FV varieties⁴⁵.

The FV school scheme (“Skolefrukt”) was introduced in the county of Østfold. Since 2004, the scheme has been open to all schools in Norway. 41 % of the Norwegian schools participated in the scheme in 2006²⁰; by 2010 this number had increased to 55 %. In the participating schools; 28 % of the pupils subscribed to the FV in 2006 and about 30 % in 2009. On average for all schools, 12% of Norwegian pupils were subscribing in 2006.

Research based evaluation (Bere 2005, Bere et al 2006a, b) has shown a slight increase in the total intake of fruit among pupils in schools participating in the school fruit scheme. However, as only about a quarter of the pupils participated, the effect was small, and it was assessed as a problem that those pupils who were eating most fruit and generally had a healthier lifestyle on beforehand were also subscribing to the fruits. A scheme with free serving of FV would have been better to level social differences and reach the target group of pupils getting little fruit at home. An experiment with free fruit serving in Norwegian schools showed that a payment scheme tended to fix the differences in fruit intake among pupils from different social classes, whereas free fruit serving increased the intake of fruit among all pupils.

⁴⁵ http://www.skolefrukt.no/vedlegg/Skolefruktretningslinjer_pr_9_mars_2010.pdf

Since August 2007, all public schools with a lower secondary level (class 8-10) receive a public funding of 0.48 Euro per day²¹, and are obliged to serve a piece of FV daily to all pupils. The total funding for this was 27 mill Euro in 2009 (217 mill NOK), and 28 mill Euro (224 mill NOK) in 2010²³. For private schools, the economic support has also been increased to ensure that FV is served. It is the responsibility of the owner of the school to administrate the fruit serving. The schools are free to choose the company to deliver the fruit. However, many municipalities have purchase agreements with certain distributors, which may include the school fruit scheme as well.

Organic school fruit is not common. A large Norwegian distributor of fruit and vegetables, Bama, by 2007 had an aim of delivering one organic fruit per week, to contribute to the public goal of 20 %. By June 2010, this goal could not be found on their web site any more. A search on their web site for "organic" revealed two hits (one about a potato variety, one about an organic farmer growing lettuce), but nothing about organic school fruit. Upon request, a Bama official reported that the total deliverance of organic fruit and vegetables within the school fruit scheme in the school year of 2007-08 was 70 tons of carrots, 55 tons of kiwi, 150 tons of bananas and 25 tons of apples. For the school year of 2008-09, the numbers were about 70 tons of carrots, 40 tons of kiwi, 90 tons of bananas and 50 tons of apples. The total amounts of fruit and vegetables delivered for school consumption were not available, but for a comparison; if 20% of the 614 000 Norwegian pupils in class 1-10 consume a piece of 100 g fruit or vegetable daily, this comprises an amount of about 12 tons.

Some small distributors have tried to specialise in delivering organic FV, e.g. by combining deliverance of FV boxes to private homes and working places (subscription scheme) and delivery to schools. However, with the free school fruit scheme, it has been very difficult to finance the required premium price for organic FV. Hence, so far this scheme has not contributed to increase the sales of organic fruit and vegetables in Norway. The quality standards⁴² mention that schools may choose organic school fruit, but then all delivery to the school must be organic.

3 Development 2007-2010, with examples of school food serving and organic food for youth in public arenas

School meals and the school fruit scheme received much attention from 2005 to about 2008. By 2010, organic food is higher on the agenda than school meals. A Google search on June 10, 2010 for the term “school food 2010” (“skolemat 2010”) revealed 16600 hits, whereas “organic food 2010” (“økologisk mat 2010”) revealed 110 000. A search for “organic school food 2010” (“økologisk skolemat 2010”) revealed 1330 hits, many related to iPOPY. Hence, there is not much focus in the public debate to combine these issues.

The Ministry of Agriculture and Food has financed some experiments with school meals and school food items, focussing on healthy, locally produced and organic food. There have also been other developmental projects in this field. A recent project of large importance in the context of this report is “Økoløft” (“Organic lift”), initiated in 2007 to support Norwegian municipalities wanting to be forerunners in organic production and consumption. From more than 100 proposals, 52 municipalities were selected, and received funding for a project leader to facilitate for two years (2008-09) processes to achieve more organic food grown and eaten in their area. Many municipalities have had children and youth as a target group for their activities, and interesting examples of activities are mentioned in chapter 4.1. Similarly, five counties were selected as forerunners for organic consumption and production. Østfold, Oslo and Akershus (ØOA) cooperate as a cluster and have employed a project leader to facilitate the growth of organic in this region, and children and youth have been appointed as a target group.

3.1 Organic food served to children and youth within “Økoløft” municipalities and ØOA-counties

In the spring of 2010, an e-mail was distributed to all project leaders of the “Økoløft” municipalities, asking them to report briefly about their experiences with possible actions and efforts focussing on organic food for children and youth. Answers were handed in from project leaders representing totally 35 out of 52 municipalities, as well as the project leader in the ØOA counties. A summary of the responses is shown in Attachment 3, and important keywords are summarized in Figure 4. The most common action was education of the staff in kindergartens, SFOs and partly also schools about organic agriculture and healthy/organic food. Courses in practical cooking were also very common and popular, utilising organic products especially for baking bread and making vegetable dishes. Courses were also offered in gardening and composting, and school gardens or vegetable gardens in the kindergartens were a popular action in several places. The food produced is consumed by the children, and a good idea is to making products for sale in a “School market”. The practical side of organic agriculture was emphasised several places by arranging visits to cooperating farms, and some farms also hosted a school garden. However, travel costs for such visits are a big challenge. Instead, farmers may come to the school to present their visions and knowledge. Pupils like very much to participate in practical, hands-on activities, and to make and be served nice food. Inviting professional cooks and other experts is a good idea.

Only a few municipalities (Stavanger, Melhus, Trondheim) have decided to have a certain share of organic food in their kindergartens and/or schools (10-15 %), or to increase the organic share (from a level close to zero). In Stavanger, a detailed questionnaire has been developed to record the organic share of the food served. The share was measured in 2009, and will be mapped again in 2010.

Information to parents or to parents and staff in common were also quite widespread. Most project leaders also reported to work with the municipal administration and politicians to root the idea of public organic consumption locally. Some complained about the large commercial distributors of organic food. Tine and Bama were both blamed for not providing good service. Organic products are difficult to find in the assortment, and it is a true challenge to establish a stable delivery of organic products. Hence, communicating with these organisations is an important task for many project leaders, e.g. to provide organic school milk locally.

Especially interesting within the context of this report was that two municipalities had developed school meal subscription schemes. One municipality (Spydeberg) has tested an organic packed lunch, to be subscribed for and sold for 2.5 Euro (20 NOK) per day. The sandwiches will be made by the municipal catering kitchen. The municipality Rissa close to Trondheim will offer a partly organic warm lunch for all pupils, made by a local college. The warm lunch scheme has been developed in cooperation with a newly established company specialising in school meals, “skolematen.no” (see next section). The company takes care of the subscription, payment and communication with the kitchen. The concept is that each school or municipality may develop its own concept of food, be it organic, local, cooled or warm etc. So far in Rissa since the system started in May 2010, the lunches are quite popular and about 30% of the pupils subscribe to the meals which are served twice per week for 4.37 Euro (35 NOK).

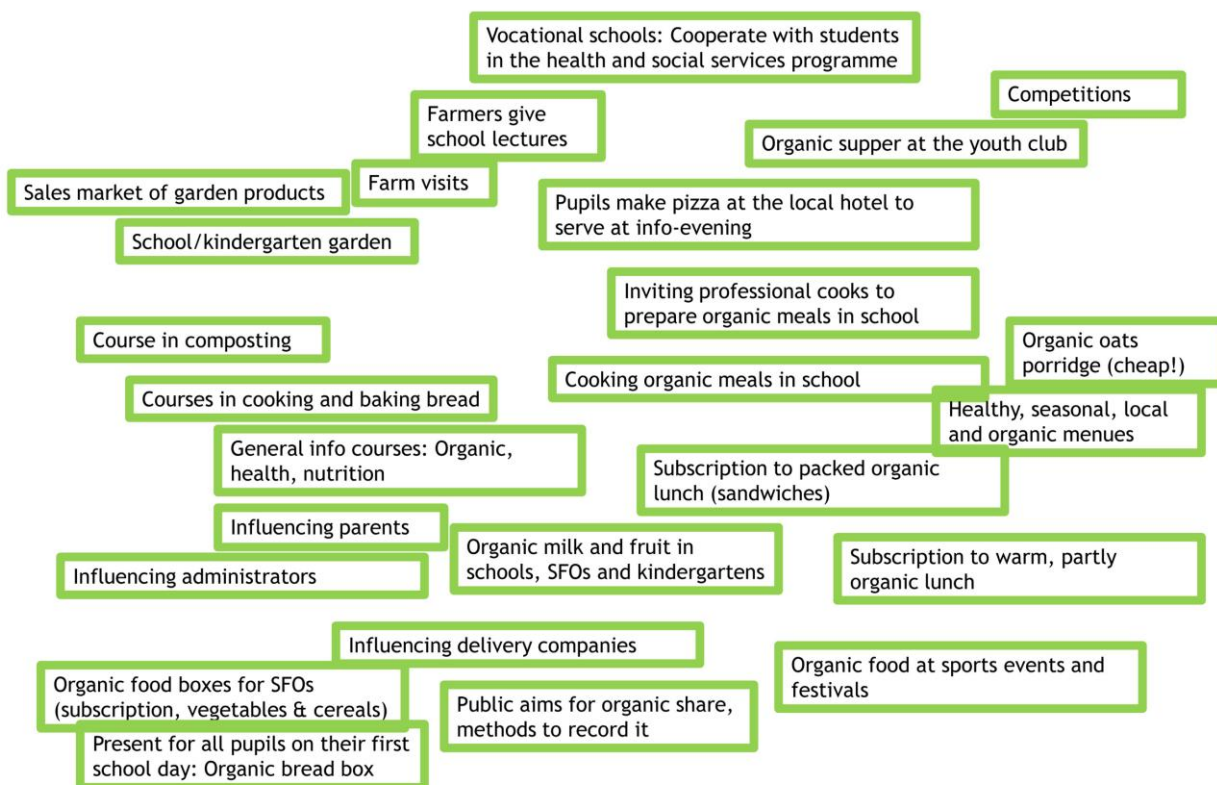


Figure 4. Examples of activities carried out by “Økoløft” (Organic lift) projects in various Norwegian municipalities.

3.2 Companies specialising in school food, and the Hundsund school restaurant

National or regional companies in Norway specialised to offer food or complete meals for schools are rare. By 2007, a private catering company “Mat360” (“Food360”) tried to establish a subscription service for school meals in Bærum (a wealthy municipality close to Oslo), Mat360. The company delivered lunches to some schools for about two years, and the price per meal was 3.37 Euro (NOK 27) per day. However, the company had to close down in 2009. The initiator claimed that the reason was an e-mail circulated to all schools by a director in the municipal school administration, recommending them not to use the meal system offered by the company⁴⁶.

As mentioned for Rissa municipality in section 3.1, “skolematen.no” is a newly established company specialised to organize very flexible subscription schemes for school meals. So far, four schools in three different counties participate, from Oslo to north of Trondheim⁴⁷. Prices, menus and the flexibility of the subscription scheme vary from school to school. For each school, a local caterer is found, and the menu is planned together with the school meal company, which ensures the quality of the meal. An example from a meal served in one of the schools in Rissa in May 2010 is shown in Fig. 5. The meals are packed in recyclable plastic containers and brought warm to the schools.



Figure 5. School lunch served at one of the schools participating in the “skolematen.no” food service, showing the containers and the food (pasta salad).

An interesting concept for school meals has been developed in a recently built lower secondary school in Bærum close to Oslo, Hundsund school. This school has developed their own school restaurant⁴⁸, in close cooperating with the NGO “Skolematens venner” (see section 2.4.1.5). The headmaster at Hundsund decided during the building that in this school, all food was to be consumed in a common dining room for pupils and staff, which is placed at the entrance (Fig 6). Two professional cooks are employed to prepare fresh and warm meals daily, and more than 90 % of the pupils subscribe. The price is 4.37 Euro (35 NOK) per day. The school restaurant ensures its economic viability by delivering food to nearby kindergartens, by offering parents and others to buy the school lunch as take-away or eat it in the school during the afternoon twice a week, and by delivering food to events etc. By June 2010, the school restaurant has been active for two years.

3.3 Norwegian iPOPY Cases

Since publically served school meals are not well developed in Norway, two cases utilising organic food outside the context of school meals were selected as Norwegian cases in the iPOPY project. This contributed to widen the perspective of the project to not merely school meals. Organic food served in schools and kindergartens of Trondheim municipality was the third case, and has been thoroughly

⁴⁶ <http://www.horecanytt.no/id/38161.0>

⁴⁷ <http://www.skolematen.no/>

⁴⁸ <http://www.hundsundskolerrestaurant.com/24607402>

analysed and described in a separate report (Bårdsen and Løes 2010). This section describes the three Norwegian iPOPY-cases.

3.3.1 The Øya case

The Øya Festival is the largest music festival in Norway, which has been arranged annually in the Oslo area since 1999 (www.oyafestivalen.com). In 2009, approximately 85 000 participants/visitors and 200 concerts were arranged over 5 days. The organizers aim at giving the audience good experiences and providing Norwegian bands an arena to perform. The festival target group is young people (15-35 years).

Since 2002 Øya has had a special focus on environment and sustainability. First this included recycling and garbage handling, and in 2003 the organizers included organic food in their environmental profile. The environmental focus was partly a result of the placing of the festival in a historical area (medieval part of Oslo) where they had to take special environmental considerations, and partly a result of the organizers motivation for these tasks. Øya was the first music festival that was certified by Debio, in 2003.

The festival is not public in the strict sense, but do serve as a big public arena for five days, as well as having a public voice/role the rest of the year. In Øya's policy, organic food should be served to "everybody" including artists, audience, guests and volunteers. The goal is to serve 100 % organic and today approximately 90 % of the food served is organic. In 2009 in five days the festival served 25 tons of organic produce in 50.000 purchased meals including snacks, and also served volunteers, musicians and crew organic meals free of charge. For example, the volunteers (approx. 2000 in 2009) were served one hot meal with a vegetarian option per day and had free access to organic bread, yoghurt and fruit throughout the day.

The restaurants that provide food at the festival are selected among Oslo restaurants that can provide "quality" and "more than just pizza". The menu includes mainly "finger food" such as hamburgers, fish burgers, pizza, wraps, nachos, hot dogs, crepes and thai food. Debio controls all the menus that are served at the festival, and menus approved by Debio are marked with the Ø-label (Fig. 2). If sponsors want to serve food at their stands, it has to be organic.

Øya has until 2008 functioned as a wholesaler and ordered the organic foods for all the restaurants, which seemed to be an effective way to organise the procurements of food. The individual restaurants did not have to relate to several different wholesalers when the festival organiser took care of the procurement and linked the wholesalers and the different restaurants. Since the festival no longer has resources to do this work completely, the restaurants are gradually taking over this work themselves, with guidance from Øya and Oikos.

The vendor contacts are also made through seminars for the restaurants, wholesalers and producers arranged before the festival. This is an arena where the Øya-festival sets the (quality) standard for the festival. Further, it functions as a consultancy for the participating restaurants, and an arena where new networks between restaurants, producers and wholesalers are created.

The Øya festival has a well established cooperation with Oikos - Organic Norway. During 2003-07 the project "ØkoRock" (OrganicRock), funded by the Norwegian Agricultural Authority (SLF) was conducted by these two partners, to develop the organic food service at the Øya festival. After the project ended, the festival has continued the cooperation with Oikos, with the objective to develop the festival as "an innovative arena for organic food". Oikos has also continued to work within the festival and events sector to promote the use of organic food, and there has been a rapid increase in the interest of serving organic food at such occasions. Since 2007, Oikos has received funding from SLF to employ a festival coordinator for organic food.

One of the goals of the Økorock project was to give the Ø-label and organic food a high profile. This includes marketing of organic, getting as much "spin off" from organic food as possible, developing existing supplier networks and working towards new networks. The ØkoRock project developed

appropriate packaging of organic food adapted to festival food service, and promoted organic food produced in Norway as well as trying out new products. The project also aimed at creating good dialogue between restaurants, suppliers and producers for further cooperation and better sales of organic products in the short and long run. Even the price for buying an organic meal at the festival was considered. The price for an organic meal should not exceed NOK 75. The reason is to give the visitors the opportunity to eat organic at a cheap rate.

To reach the goal of 100 % organic food at Øya, the organizers are not giving any of the participants at the festival a choice whether to eat or serve organic or not. Instead the choice is taken of the organizers beforehand, as the project leader of ØkoRock, Linnéa E. Svensson says:

“We set the frames, - that means we have made the choices. We wish to give the audience a good experience. I think trends are made through good experiences” (interviewed on June 14, 2007)

The driving forces for Øya have been environment, sustainability, grass root action, and innovation. The organizers of Øya, eight full time employees, would most likely have made the organic staking regardless of the public action plans and support for organic food. They portray themselves as motivated idealists who are committed and buy organic food also in private. Øya has set their own standards (for example, 100% organic food to everybody) and the festival has been in forefront for environment at festivals.

Øya will continue with their organic food, because it is an inherent part of their profile. The organizers see that they through being a positive model can create a new trend. They see their role as being spokespersons for the public. Øya is today viewed as a model or show window for festival organizers. They arrange seminars for other festival organizers, NGOs and organizers of sports events. In co-operation with GRIP (Norwegian Foundation for Sustainable Consumption and Production), Øya was central in publishing an environmental handbook for festivals in 2004. Øya is positioned as the most ‘politically correct’ festival with extensive recycling of garbage (12 fractions). Øya started with organic festival food in 2003 and today several music festivals and cultural events have started serving some organic food. 49 events cooperated with Oikos about organic food serving in 2008, and increase from about 20 in 2006.

3.3.2 Trondheim municipality

Trondheim municipality was the first in Norway where the politicians agreed in the city council (October 2007) that schools and day-care institutions should offer some organic food, to contribute to increase the public consumption of organic food in Trondheim (Bårdsen and Løes 2010). However, the point of departure was unknown; the share of organic food consumed in these institutions has so far not been recorded. Hence, the goal, “By 2011, 20 % more kindergartens and schools should offer organic food as compared to 2007”, is rather vague. The project “Children’s Green City” (CGC) has been emphasized in Trondheim for many years, and has been an important tool to achieve a larger consumption of organic food among the children in Trondheim. Further, Trondheim participates in the “Økoløft” project (see section 3.1)

There are about 250 kindergarten and 69 schools, both private and public, in the city of Trondheim. Of these, 111 kindergartens and 41 schools participate in CGC by 2010, and 86 kindergartens and 32 schools have received the flag so far in this year. The remaining units are working hard to deserve this certification. The interest to participate in this scheme increases with time; 61 kindergartens and 23 schools received the flag in 2008. Kindergarten and schools participating in CGC use the international Green Flag certification⁴⁹ as a tool to implement an environmental action plan. To continue to be allowed to use the flag they have to formulate new target areas each year, and fulfil an annual certification process.

⁴⁹ <http://www.fee-international.org/en>

The Green Flag scheme is an international environmental certification system with 50 participating countries by 2010. Kindergartens, primary and secondary schools may participate in the scheme and apply for annual certification. The Green Flag is a pedagogic means, linked to the curriculum and pedagogical plans for the schools and kindergartens. Each unit establishes its' own goals and working areas, which have to be linked to environment. The Green Flag contributes to strengthen the emphasizing of environmental concerns in the school or kindergarten, and involves all school actors - the pupils, school staff and the parents as well as municipal bureaucrats and politicians. The demand for an annual re-certification and implementation of new working areas and topics, along with a demand for continuation of established efforts, ensures continuity.

With respect to food serving, most schools in Trondheim offer only free or subscribed fruits and vegetables (FV), and milk subscription. Some schools have canteens with some food items for sale, but no organic so far. The before- and after- school care (SFO) serve some organic food, at least in some schools. A study in November 2009 revealed that about 5 % of the school milk (0.25 litre containers) consumed in Trondheim was organic (Løes and Bårdsen 2009). However, this consumption appeared on only 11 out of 62 schools. As Trondheim happens to be located in the area in Norway where organic school milk is available, encouraging all schools to offer organic school milk seems to be an easy way to increase the organic share.

Several kindergartens prepare food for the children, e.g. porridge for breakfast, some kind of warm meal at noon and a snack (FV) in the afternoon. Some of this food may be organic. Public kindergarten and schools are bounded to the purchased agreement of the municipality, where the delivering companies are obliged to offer organic products, but no detailed instructions are given.

Educating the staff in kindergartens and SFOs about healthy nutrition and making food from basic food products has been the most important tool to introduce and increase the share of organic food in Trondheim so far. By now, about 380 employees have been trained, and CGS in cooperation with the "Økoløft" project are currently working to prepare more efficient food distribution, purchase routines, food storage and periodical menus (5 weeks) including organic food. A professional cook is a valuable partner in this effort. The development will first be tested on 5-6 units, thereafter spread. Training of staff responsible for food serving will be extended to the schools.

3.3.3 The Norwegian Armed Forces go organic

To support the public goal of 15 % organic consumption by 2020, the Norwegian Armed Forces have taken responsibilities. The Norwegian Defence Logistical Organisation (NDLO) through its Catering Management Section is responsible for all food services in the Armed Forces. NDLO is based in Oslo. A minimum framework and standard for the kitchens activities are set by NDLO. The local kitchen management and the regional catering manager are responsible to develop the kitchens beyond this.

After a successful test project in the Air Force in Mid-Norway (around Trondheim), DLO decided in 2009 that the Norwegian Armed Forces should consume organic food similar to at least 5 % of the total expenditure in 2010, 10 % in 2011 and 15 % in 2012. Due to this food procurement in the Armed Forces, Norwegian soldiers and staff will be a significant user of organic food within the next years. The food industry was informed about this strategy during last food tender from NDLO.

In Trondheim, the Air Force Academy participated in the test project, funded by Norwegian Agricultural Authority (SLF). The food served at the Air Force Academy has a very high standard. According to the local chef Ole Morten Hansen, this standard is impelled by the regular eating guest and the external customers that buy catering services from the kitchen. Two important factors for the professional development of the kitchen are the Defence's strong focus on apprenticeships and the guidance the kitchen is getting from NDLO. Due to the long experience with organic food in this kitchen, the experiences from the Air Force Academy with organic food will be referred. The reason for mentioning this Academy in special is also that it is an example of organic food offered to youth under education in Norway, even if the students, 20-30 years old, may be somewhat older than the pupils otherwise focussed in this report.

By June 2010, it is estimated that the use of organic food accounts for at least 15 % of the total expenditure that the Air Force Academy has on food procurement. Commonly used organic products

are fat reduced milk, yoghurt, sour cream, full-fat buttermilk (kefir), cheese (Norvegia), breakfast cereals, dried fruits, unrefined sugar, bread, carrots, celery, potatoes, cabbage, cauliflower, broccoli, red peppers, onion, leek, some fruits, salmon, dried pasta, rice, wheat flour and various cooking oils. The kitchen puts emphasis on buying local products, if available.

The kitchen at the Air Force Academy in Trondheim provides breakfast, lunch buffet and dinner for about 120 students and employees. The food service also includes weekends. Fruits, water and soft drinks are available throughout the day. The students staying at the academy campus (about 70 %) will normally turn to account all meals that the kitchen serves, while employees only consume lunch during the week days. In addition to this, the kitchen generates important income through hosting parties and catering food for meetings and seminars. This amounts to nearly 50 % of the kitchen's total activity. The kitchen employs 6 regular staff and 4 apprentices.

The legitimacy of using organic products at the Air Force Academy as well as in the Armed Forces in general is found in the political statement of cooperation for the present coalition government in Norway, the Soria Moria statement²⁰. The Armed Forces initiated a project where the middle region of Norway was used as a model to reach the goal for organic public procurement set in the Soria Moria statement. The use of organic produce has also a strong legitimacy locally at the Air Force Academy kitchen where the chef emphasises their role in awareness rising and providing a healthier and tastier alternative. He also finds it important to send a signal that the kitchen does care about the environment and what the guest are eating.

NDLO thinks that a meal eaten at one of their kitchens should provide more than just filling the stomach. The project manager in NDLO, Commander Pål H. Stenberg, says that they would like to provide the students with a respect for the food and the meal situation. In addition to this the food service should meet current recommendations and standards on nutrition and hygiene.

During the last years Operation Green Wave has been implemented in all kitchens of the Norwegian Defence. The aim of this campaign is to increase the consumption of fruits and vegetables up to 750 grams vegetables and fruit per day. It has similarities to the present work with increased use of organic products. The chef remarks that campaigns like this generate extra work for him and the assistant chef in seeing to that all new routines are respected and lived up to. He also finds challenges related to procurement and stock keeping. The solution he sees to this is making solid routines, involvement of all employees and doing informational work. Having seminars and social happenings are a good means to establish a common feeling of ownership and loyalty toward the projects mission.

4 Literature

- Andersen, L. F. et al. 2005. Overweight and obesity among Norwegian school children: Changes from 1993 to 2000. *Scan J Publ Health* 33, p 99-106.
- Bere, E. 2005. The Norwegian school fruit programme: evaluating paid vs. no-cost subscription. *Prev Med*, 41, p 463-470.
- Bere, E., Veierød, M.B., Bjelland, M. and Klepp, K.-I. 2006a. Free school fruit - sustained effect one year later. *Health Educ Res.* 21(2), p 268-75.
- Bere, E., Veierød, M.B., Bjelland, M. and Klepp, K.-I. 2006 b. Outcome and process evaluation of a Norwegian school randomized fruit and vegetable intervention: Fruits and Vegetables Make the Marks. *Health Educ Res.* 21(2), p 258-67.
- Bjelland, I. 2007. Ren i skinn er ren i sinn - skolefolk og medisineres ordskifte om norske skolebarns helse 1920-1957. Master thesis, Dep. of history, University of Bergen, p 66. Online at https://bora.uib.no/bitstream/1956/2364/1/Masterthesis_Bjelland.pdf
- Bugge, A.B. 2007. Ungdoms skolematvaner - refleksjon, reaksjon eller interaksjon? Fagrapport nr. 4-2007. SIFO (National Institute for Consumer Research) Oslo, Norway. 203 p.
- Bårdsen, M.G. and Løes, A.-K. 2010. Organic food in schools and kindergartens in Trondheim. A case study report. *Bioforsk Report Vol. 5 No. 18. 2010/iPOPYP discussion paper 1/2010.* Bioforsk. Tingvoll, Norway. 39 p.
- Døving, R. 1999. Matpakka - den store norske fortellingen om familien og nasjonen. *DIN, Tidsskrift for religion og kultur.* Online at <http://www.hf.ntnu.no/din/doving.html>
- Helsedirektoratet (SHdir) 2008. Fysisk aktivitet blant barn og unge i Norge. En kartlegging av aktivitetsnivå og fysikk form hos 9- og 15-åringer. Rapport.
- Júlíusson, P.B. et al. 2007. Overweight and obesity in Norwegian children: secular trends in weight-for-height and skinfolds. *Acta Paediatr* 96, p 1333-7.
- Løes, A.-K. and Bårdsen, M.G. 2009. Mer økologisk skolemat i Trondheim! *Økologisk landbruk* 4/2010, p 39-41.
- Nielsen, T., Nölting, B., Kristensen, N.H. and Løes, A.-K. 2009. A comparative study of the implementation of organic food in school meal systems in four European countries. *Bioforsk Report* 4 (145) 2009, iPOPYP discussion paper 3/2009. Tingvoll, Norway. 36 p.
- Oellingrath, I.M., Svendsen, M.V. and Reinboth, M. 2008. Overvekt og fedme blant elever på 4. trinn i grunnskolen i Telemark fylke, Norge. *Nordisk tidsskrift for helseforskning* 4 (2008) Nr 4, p 18-28.
- Vilimas, K., Glavin, K. and Donovan, M.L. 2005. Overvekt hos åtte- og 12-åringer i Oslo i 2004. *Tidsskrift for den Norsk Lægeforening* 125, p 3088-9.

Appendix 1: Guidelines for the school meal in primary and lower secondary school, and upper secondary school

(”Retningslinjer for skolemåltidet i grunnskole og videregående skole”, translations by the author)

By the Norwegian Directorate for health and social affairs (SHdir) (www.shdir.no)

Forankring i regelverket:

Lov om grunnskolen og den videregående opplæringen (Opplæringsloven) av 17. juli 1998.

Kapittel 9a. Elevene sitt skolemiljø, med § 9a-1 til § 9a-9, blir føyd til ved lov etter resolusjon av 20. desember 2002 nr. 1735 og trer i kraft 1. april 2003. Innholdet i kapittel 9a presiseres i de materielle kravene i Forskrift om miljørettet helsevern i barnehager og skoler m.v.

Forskrift om miljørettet helsevern i barnehager og skoler m.v.

Kapittel III Spesielle bestemmelser § 11. Måltid

Det skal finnes egnede muligheter for bespising som også ivaretar måltidets sosiale funksjoner. Virksomheten skal i nødvendig utstrekning ha tilfredsstillende muligheter for lagring, tilberedning og servering av mat i samsvar med næringsmiddelovgivningen. (§ 11 is translated to English in the text, see chapter 1.3.2.1).

Remarks to §11 (”Merknader til § 11. Måltid”)

Sosial- og helsedirektoratets retningslinjer for matsservering og måltider i skole og barnehage bør legges til grunn ved matsservering slik at den ernæringsmessige verdi av måltidet sikres. Lov av 19. mai 1933 nr. 3 om tilsyn med næringsmidler m.v. med forskrifter, herunder generell forskrift av 8. juli 1983 nr. 1251 for produksjon og frambud m.v. av næringsmidler, forskrift av 15. desember 1994 nr. 1187 om internkontroll for å oppfylle næringsmiddelovgivningen og forskrift av 12. november 1997 nr. 1239 om næringsmiddelhygiene, gjelder for tilberedning og servering av næringsmidler. Måltidets sosiale funksjon bør ivaretas ved at det er fysisk tilrettelagt for spising og avsatt tilstrekkelig tid til at trivsel oppnås.

The school should offer the pupils:

- At least 20 minutes break for eating
- An adult should be present in grades 1-4, preferably also in higher grades
- Fruit and vegetables
- Fat reduced milk
- Bread or crisps bread
- Availability of cold drinking water
- A nice environment for eating
- Meals with maximum 3-4 hours interval
- Canteen or food stall in lower&upper sec. school

The school should NOT offer the pupils:

- Soft drinks and squash
- Chips, snacks and sweets
- Cakes, muffins and waffles daily

Skolene bør tilby elevene:

- Minimum 20 minutter matpause
- Fullt tilsyn i matpausen i 1.-4. klasse, helst også på høyere klassetrinn
- Frukt og grønnsaker
- Lettmelk, ekstra lett lettmelk eller skummet melk
- Enkel brødmatt
- Tilgang på kaldt drikkevann
- Et trivelig spisemiljø
- Måltider med maksimalt 3-4 timers mellomrom
- Kantine eller matbod på ungdomsskole og videregående skole

Skolene bør ikke tilby elevene:

- Brus og saft
- Potetgull, snacks og godteri
- Kaker, vafler og boller til daglig

The school canteen should offer food based on:

- Varied and whole-grain bread types
- Fat reduced margarine
- Varied spreads
- Fruit - whole, sliced and used as spreads

- Vegetables - cut, used as spreads, for salad, cooked
- Fat reduced milk
- Juice and cold drinking water

Skolekantina bør ha et mattilbud basert på:

- Varierte og grove brødvarer
- Lettmargarin eller myk margarin
- Variert pålegg
- Fukt - hele, i stykker eller som pålegg og tilbehør
- Grønnsaker - skåret opp og lagt i vann, som pålegg, salat eller varmrett
- Skummet melk, ekstra lett lettmelk og lettmelk
- Juice og kaldt drikkevann

Appendix 2: Guidelines for food serving and meals in day-care centres (kindergartens)

(”Retningslinjer for mat og måltider i barnehagen”)

By the Norwegian Directorate for health and social affairs (SHdir) (www.shdir.no)

MÅLTIDER

Barnehagen bør:

1. Legge til rette for minimum to faste, ernæringsmessig fullverdige måltider hver dag med medbrakt eller servert mat
2. Sette av god tid til hvert måltid, minimum 30 minutter til å spise, slik at barna får i seg tilstrekkelig med mat
3. Legge til rette for å kunne spise frokost for de barna som ikke har spist frokost hjemme
4. Ha maksimum 3 timer mellom hvert måltid. Noen barn, særlig de yngste, kan ha behov for å spise oftere
5. Legge til rette for at de voksne tar aktivt del i måltidet og spiser sammen med barna
6. Legge til rette for et godt fungerende og trivelig spisemiljø
7. Sørge for god hygiene før og under måltidene og ved oppbevaring og tilberedning av mat
8. Ivareta måltidenes pedagogiske funksjon

MAT OG DRIKKE

9. Maten bør varieres over tid og gi varierte smaksopplevelser
10. Måltidene bør settes sammen av mat fra følgende tre grupper:
 - Gruppe 1: Grovt brød, grove kornprodukter, poteter, ris, pasta etc.
 - Gruppe 2: Grønnsaker og frukt/bær
 - Gruppe 3: Fisk, annen sjømat, kjøtt, ost, egg, erter, bønner, linser etc.
11. Plantemargarin og olje bør velges framfor smør og smørblandede margarintyper
12. Drikke til måltidene bør være skummet melk, ekstra lettmeik eller lettmeik
13. Vann er tørstedrikk mellom måltidene, og bør også tilbys til måltidene
14. Mat og drikke med mye tilsatt sukker bør unngås
15. De fleste markeringer og feiringer bør gjennomføres uten servering av søt og fet mat og søt drikke

Appendix 3: Økoløft (“Organic lift”)

Overview of actions conducted in municipalities participating in the project “Økoløft” and in the organic forerunner-counties Østfold, Oslo and Akershus to increase the public consumption of organic food among children and youth (in Norwegian, no translation).

Kommune	Skolehage	Skole og SFO	Barnehage (BH)	Annet
Hemnes, Nordland	Bleikvassli skole	5.-7. besøker Ø sauegård, smake Ø mat	Besøk i 5 BH m innleid kompetanse (Bioforsk Tjøtta), <u>skolemelk</u>	
Vestvågøy (Lofoten), Nordland		<u>Innleide kokker</u> til å undervise i bruk av lokale (ikke Ø) råvarer		
Vefsn, Nordland		-Besøk på skoler (4. klasse) <u>-Gårdsbesøk</u> -Jobber mot Tine for mer Ø skolemelk	Ø melk og <u>frukt</u> i flere BH	Foredrag med innleid <u>ekspert</u> (Berit Nordskog)
Nærøy, Nord-Trøndelag		- Mål om økt forbruk av Ø melk, meieriprod., frukt og grønt: Info til foreldre, kontakt Tine osv - 5-åringer på gårdsbesøk - 6. klassinger på gårdsbesøk - Lagt til rette for tiltak fra høsten 2010 med informasjon, kommunikasjon og avtaler med gårdbruker -Noen skoler med i ”Grønt flagg” -Info på <u>foreldremøter</u> -Delt ut info ”Den lille Ø matboken” til alle skoler	-Delt ut <u>info</u> ”Den lille Ø matboken” til alle BH -Kartlegger interessen for Ø mat blant foreldre	-Ø kveldsmat på <u>ungdomsklubb</u> (mat bet. av klubben) -Samarb med lokalt Ø produsentlag
Snåsa, Nord-Trøndelag	-På tre skoler og i en barnehage -Våronn med <u>hest</u> og potetsetting	-Mat fra hagene ble spist rått, i suppe, syltetøy, saft osv. -”Suppehefte” med oppskrifter til alle -Laget produkter til <u>salgsmarked</u> på skolene. -U-skole: Matglade dager, Ø middag for 120 pers (lam), invitert pølsemaker utnyttet hele lammet	Mat fra hagene ble spist rått, i suppe, syltetøy, saft osv.	Samarb Bonde- og BKlag og ”Sunt og godt” (fylkes-komm. prosjekt i NTrlag)
Fosnes og Overhalla, Nord-Trøndelag	To skoler i Fosnes og to BH	Bær og grønnsaker fra skolehagene brukes i <u>skolekjøkkenet</u>	-Produkter fra kjøkkenhagen spises av barna -Ø <u>havregrøt</u> 3-5 g per uke, 30% Ø melk, ikke ekstra foreldrebet.	
Trondheimsreg., Sør-Trøndelag (Melhus, Selbu, Holtålen, Trondheim)		Kurs for ansatte i SFO	-Kurs for ansatte -Utvikling av gode <u>menyer</u> : Riktig ernæring, Ø og sesong	-Ø mat på <u>rockefestival</u> (Pstereo) -Melhus kommune betaler merpris for Ø mat

Rissa, Sør-Trøndelag		<ul style="list-style-type: none"> -Innført foreldrebetalt skolemåltid (på sikt varm lunsj) med min. 20% Ø råvarer, produsert lokalt (Fosen folkehøgskole), på alle fem skoler i kommunen, to dager per uke kr 35 per måltid. Samarbeid med nystartet firma, "skolematen.no" -Undervisning om Ø mat i faget "Mat og helse" -Info til foreldre 	<ul style="list-style-type: none"> -Matkurs for ansatte -Avtaler med lokale butikker om levering av Ø frukt og grønt, mot økt foreldrebetaling -Infobrosjyre 	
Gjemnes, Tingvoll og Vestnes, Møre og Romsdal		<ul style="list-style-type: none"> -Jobbing mot Tine (skolemelk) og BAMA (frukt) -Tillaging og servering av Ø mat på VG skole (suppe, brød), info til elever og lærere, <u>samarb helse og sos fag elever</u> -Info til rektorer 	<ul style="list-style-type: none"> -Matlagingskurs, dagtid for alle ansatte i Gjemnes-BH -Kveldskurs for utvalgte ansatte i Tingvoll-BH, kosthold -Info til styrere 	<ul style="list-style-type: none"> -Sommerleir, fotball i Tingvoll med Ø mat -Stand på lokalt marked i Gjemnes rettet mot 10.klasse
Balestrand, Sogn og Fjordane		<ul style="list-style-type: none"> - 9. klasse laget Ø pizza på hotellkjøkken, for 70 pers! Kombinert med info om Ø. - Ø dag med mat fra lokal butikk + lokalt hjortekjøtt og egg på to oppvekstsentre. -Kjøpt inn Ø mel til å bake brød -Info til foreldre 		
Voss, Hordaland		<ul style="list-style-type: none"> -Introduksjonskurs om Ø mat 	<ul style="list-style-type: none"> - Introduksjonskurs om Ø mat -Kurs om Ømat og ernæring for små barn -Kokt Ø suppe på bål -Formidlet oppskrifter tips fra andre kommuner 	<ul style="list-style-type: none"> Planer om lokal og Ø mat på Voss cup (fotball) og andre arr.
Kvam, Hordaland		<ul style="list-style-type: none"> -Jobber for å få Ø frukt i skolene 	<ul style="list-style-type: none"> -Møte med alle styrere -Kurs for medarb. -En BH med Ø mat som tema, 100% Ø og lokal mat i oktober 2009, siden 30-50% Ø mat, ikke ekstra foreldrebet. Kurs for ansatte. 	
Sandnes og Stavanger, Rogaland	Etabl. vil bli støttet i 2010, evt. på Ullandhaug	<ul style="list-style-type: none"> Mål om 15% Ø mat på 10 skoler i Stavanger i 2010. Kursing av personale (SFO) Kartlegging av forbruket i 2009 (volum); Gosen U-skole 70% Ø mat i kantina, ellers lite - 1.64% (en skole Ø frukt, 5 av 19 skoler med noe Ø). Snitt skoler inkl Gosen 4.62% . På SFO 0% Ø. 	<ul style="list-style-type: none"> Mål om 15% Ø mat (Grønne BH) Kursing av personale Flere nystartede BH i Stavanger satses på mye Ø mat fra dag 1- miljøprofil =) Kartlegging av forbruket i 2009 (volum); 6,64% - 7 av 18 barnehager. 	<ul style="list-style-type: none"> -Konkurranse for U-skoler om reklameprodukter for Ø mat (T-skjorte, film)- dårlig respons -Ø matbokser til 1. klassinger ved skolestart 2010

<p>Drammensreg., Buskerud-Vestfold (Drammen, Hurum, Røyen, Lier, Nedre Eiker, Svelvik og Sande)</p>	<p>2009: Kjøkkenhagekurs i samarbeid med Steiner-BH</p> <p>2010: Kjøkkenkurs på Steiner-BH landsstevne i Drammen, og 4 kurs i samarbeid med lokale landbrukskontor</p> <p><u>Kompostkurs</u> for BH</p>	<p>-Kurs for SFO ansatte, vekt på grønnsaker og brødbakst</p> <p>-<u>Matkasser</u> med 0 grønnsaker og mel levert på fire SFO i 7 uker, med oppskrifter og kurs.</p> <p>-Mål om 0 mat på SFO minst 1 g pr mnd.</p> <p>-Forsøk med elevdrevet kantine på en skole</p>	<p>2009: -Matlagingskurs i samarbeid med SteinerBH.</p> <p>-Bakekurs i samarbeid med "Fellesløft for 0 matkorn"</p> <p>2010: -To matlagingskurs og tre bakekurs i samarbeid med prosjekt "Sunn matglede (på SFO)" (Vestfold BK lag)</p> <p>-Kompostkurs i samarbeid med lokalt renovasjonsselskap og "Grønn hverdag"</p>	<p>-Matkasser til SFO skal testes i flere kommuner</p> <p>-Mer enn 45 BH har deltatt på ett eller flere kurs</p>
<p>Aurskog-Høland, Akershus</p>	<p>Hagebruk og besøkgård knyttet til undervisning i naturfag, mat og helse og samfunnsfag</p>	<p>Kokkekurs for ansatte i SFO, samarbeid med Kulinærisk akademi</p>	<p>Kokkekurs for ansatte, samarbeid med Kulinærisk akademi</p>	<p>-Økomat på Ungdommens kulturmønstring i samarbeid med kokkelinje på lokal VG skole</p> <p>-Økomat på skoletilbud for ca 10 elever med spesielle behov</p>
<p>Indre Østfold (Trøgstad, Spydeberg og Eidsberg)</p>	<p>Skolehage på 0 gård i Spydeberg for 8.-9. klasse, inkl. matlagning</p>	<p>-<u>Matpakkeprosjekt</u>, Spydeberg. Abonnement på 0 matpakker, 20 kr/stk + 10 kr subsidiert av prosjektet. Samarbeid med kommunalt storkjøkken.</p> <p>-0 meny i "mat og helse", U skole Eidsberg. Utvalg 0 varer og prisforskjeller i butikk, matlagning, info om prod.</p>	<p>-0 mnd (okt) i en BH, Spydeberg. Gårdsbesøk, kompost, mat. Utarbeidet opplegg som kan overføres til andre BH.</p> <p>-Kurs for 2 ansatte per kommune ved Kulinærisk akademi (KA)</p> <p>-Kurs for alle ansatte i Trøgstad-BH ved KA</p>	<p>Konkurranse om høyest andel 0 mat i BH, med utarbeidet Excel ark, liten respons hittil men gjentas, premie 0 mat</p>
<p>Hadeland, Oppland</p>		<p>Kurs for ansatte, info til foreldre i SFO</p>	<p>Kurs for ansatte, info til foreldre</p>	
<p>Solør, Hedmark (Grue, Åsnes, Våler)</p>		<p>-<u>Foredrag med to 0 bønder</u> og matlagning i 9. klasse</p> <p>-Matlagning i 6. klasse (flatbrød potetsuppe)</p>	<p>-Kurs for ansatte, baking, ernæring</p> <p>-Besøk i BH med demo av 0 varer</p>	<p>-0 mat på fotballturnering</p> <p>-Innkjøpsavtaler et problem</p> <p>-Motvilje fra Bama</p>
<p>Foregangfylker for økt økologisk omsetning i Østfold, Oslo og Akershus</p>	<p>Geitmyra skolehage i Oslo, mulig nasjonalt komp.senter for skolehage</p>	<p>-0 mat i skolekjøkken (som del av læreplanen)</p> <p>-0 mat i kantiner, spesielt frukt, grønt og melk.</p> <p>-0 matservering og -aktiviteter på SFO.</p>	<p>-Matkurs for ansatte med etterfølgende en-til-en veiledning i BH.</p> <p>-Abonnementsordning for 0 mat</p>	<p>-0 matkurs for 4H-ungdom.</p> <p>-Jobber for at 0 mat skal bli mulig å velge på idrettsarr., som Norway Cup.</p> <p>-0 besøkgårder ('Bondens Økologi') for barn, unge og andre.</p>



The iPOPY project

The aim of the project “innovative Public Organic food Procurement for Youth - iPOPY” (<http://www.ipopy.coreportal.org/>) 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 will be analysed. The research project is a co-operation between Norway, Denmark, Finland and Italy. German researchers also participate, funded by the Research Council of Norway. iPOPY is one of totally eight projects that were funded through a joint call of the ERA net CORE Organic I in November, 2006.

Project manager: Anne-Kristin Løes, Bioforsk Organic Food and Farming

Project partners:

Norway: Bioforsk Organic Food and Farming and SIFO, National Institute for Consumer Research

Germany: University of Applied Sciences, Münster and Center for Technology and Society, Technical University Berlin

Denmark: Aalborg University

Finland: University of Helsinki, Ruralia Institute

Italy: State University of Milano and ProBER (Association of organic and biodynamic producers of Emilia Romagna)

iPOPY Publications:

All publications can be downloaded from the open digital archive Organic E-prints: www.orgprints.org. Search for the keyword iPOPY.