

## **An Outline of Denmark's School Food Program:**

### **Overview**

Denmark does not have a school food program and may not prioritize initiating one because they have a strong tradition of Danish '*madpakke*.' *Madpakke* is a school-packed lunch that contains a freshly made sandwich with rye bread and some kinds of protein, a compact lunch meal to be eaten in 15-20 minutes during the break in the classroom. Parents make it in the morning for their children. The tradition is meant to demonstrate the love and care parents have for their children.

Food is linked to some of the UN-SDGs and is a politically emphasized objective to achieve in schools and the local community.

In 2007, the City of Copenhagen decided to initiate a school food program (within Copenhagen only) with a holistic view on quality, taste, and health, and the involvement of students. Copenhagen's SFP greater goal is to create a concept that would likely change the mindset of Copenhagen's citizens about eating, starting from pupils and their parents. The concept encourages youth to think about the food they choose to eat and link to their identities.<sup>1</sup>

The Copenhagen Municipality, integrating with the Government's food policy and the city's own initiative, chose *organic and local food* in school meals to develop healthier eating patterns as their main strategy to achieve the primary objectives - reducing the obesity rate among children and young people.<sup>2</sup>

As of 2017, the analysis among the schools in Copenhagen shows that approx. 9,000 students eat school meals daily and there are meals at 52 out of 59 ordinary primary and lower secondary schools in Copenhagen. The distribution of school food is somewhat weaker in special schools, where only four out of nine schools have school food.

In total, 87% of primary school students in Copenhagen have access to school meals - this corresponds to 33,500 students. 28,500 students at EAT schools and 5,000 at *Food Schools* (500 of those at special schools). Most students in Copenhagen have access to school meals which have become part of going to school.<sup>3</sup>

### **Funding**

Most schools in Copenhagen have a school meal scheme. Either in the form of EAT or as a Food School, with its own production kitchen and canteen. For both schemes, low-income families can apply for a financial subsidy for school meals.<sup>4</sup>

---

<sup>1</sup> Martinez. L. 2015. Towards a sustainable public food service in Copenhagen using the lever of education and training. Cities Territories Governance. From: [http://www.citego.org/bdf\\_fiche-document-1327\\_en.html](http://www.citego.org/bdf_fiche-document-1327_en.html)

<sup>2</sup> Martinez. L. 2015. Towards a sustainable public food service in Copenhagen using the lever of education and training. Cities Territories Governance. From: [http://www.citego.org/bdf\\_fiche-document-1327\\_en.html](http://www.citego.org/bdf_fiche-document-1327_en.html)

<sup>3</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 12. From: [https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate).

<sup>4</sup>See the Implementation section for more on *Food Schools* and EAT. The Appendix has more information on Copenhagen's school food initiatives.

The price for one school meal in Copenhagen ranges from €3.50 - €4.50 per meal.<sup>5</sup> There is no national funding for school food. Instead, the municipality of Copenhagen helps with the funding of around eight to ten million Canadian dollars per year. The standard price that each parent pays is around \$5 Canadian. But the actual price of food if production cost is included is around \$8 to \$10 Canadian. dollars.

The Copenhagen Municipality has free and reduced-priced meals and has recently agreed to fund school meals completely so that all families can access school food programs.<sup>6</sup>

Food school production kitchens are fully equipped and would represent a total of around ten million Canadian dollars spent by the municipality.

### **Food Literacy Education**

Aside from the food literacy initiatives of the School Food and EAT programs, the Danish National Board of Health created a typology in 1999 that helps us understand how the nation has changed over time.

- Food is shown as a social welfare project in which food is provided as a method of promoting health equity - students are mainly recipients of a public benefit in this case.
- Food is a pedagogical endeavor in which food is not only prepared with student involvement but also presented as a didactic resource.<sup>7</sup>

While school food in the form of 'feeding programs' has not achieved national traction, a growing number of projects view food as a vehicle for learning.

Home economics has been renamed 'Food Knowledge', requiring additional lessons, instructor credentials, and perhaps an exam in older grades.

A national food 'Bildung' program for teachers was also launched by the government. Bildung is a German term referring to learning that is integrated into one's own life and understanding of oneself. A continuous development of a life-long (learning) "journey." In Denmark 'food bildung' represents a central concept of 'food literacy' or 'food systems.'

There is a need for funding for the teachers to learn more about food bildung.

The LOMA-local food project is an innovative school food concept that involves students in the production kitchen using local ingredients. The LOMA project supports learning, health, wellbeing, and sustainability through integrating food and meals into teaching in the participating schools. Students are involved in food preparation and in planning the menu. At the

---

Københavns Kommune. n.d. From:

<https://www.kk.dk/borger/pasning-og-skole/skole-og-fritid/skole-og-fritidsinstitution/mad-i-skole-og-fritidsinstitution>

<sup>5</sup> EAT. n.d. From: [https://kbh.skolemad.dk/eat\\_koebenhavns\\_kommunes\\_skolemad/priser/](https://kbh.skolemad.dk/eat_koebenhavns_kommunes_skolemad/priser/)

<sup>6</sup> The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: <https://www.youtube.com/watch?v=KXUhNSgJGPo>

<sup>7</sup> The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: <https://www.youtube.com/watch?v=KXUhNSgJGPo>

same time, food preparation is integrated into the school curriculum. As part of the teaching, schools must cooperate with local food suppliers e.g., through school excursions or inviting experts in as guest lecturers in classes.<sup>8</sup>

By using the Loma model, the municipality of Svenbo used EU regulations to create contract tenders that can be filled with local sourcing. Contracted food producers can not only take part in the learning process and teaching but also open their production sites for schools and tours.

A new discipline founded on sensory research/taste didactics encourages Danes to view taste as a vehicle for fostering critical awareness rather than something to be 'fixed' so kids make the correct choices.

## **Nutrition**

Denmark has a national nutritional guideline that has a larger focus on plant-based food, organic food, and sustainable food procurement.<sup>9 10 11</sup>

Denmark's school food standards and guidelines are based on the Official Dietary Guideline - good for health and climate published by the Ministry of Food, Agriculture, and Fisheries of Denmark in 2021. The dietary guideline is applied for the general population from 2 years old to 65 with no specific requests in their diet and health conditions. The standard is largely focused on consuming *plant-based food*, with the following seven main principles:<sup>12</sup>

- Eat plant-rich, varied and not too much.
- Eat more vegetables and fruits.
- Eat less meat – choose legumes and fish.
- Eat wholegrain foods.
- Choose vegetable oils and low-fat dairy products.
- Eat less sweet, salty, and fatty food.
- Quench your thirst with water.

## **Implementation**

Since there was not a school food culture in Denmark and investing in building school food kitchens for 48 schools was too much, the Copenhagen Municipality came up with two solutions, building schools with kitchens for school food (called *Food Schools*) and establishing EAT, a

---

<sup>8</sup> Field to School. 2022. LOMA project. Erasmus+ programme of the European Union. From: <https://www.fieldtoschool.eu/denmark-1>

<sup>9</sup> Food and Agriculture Organization of the United Nations. n.d. Food-based dietary guidelines-Denmark. From: <https://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/Denmark/en>

<sup>10</sup> European Committee of the Regions. 2018. Sustainable public procurement of food. From: <https://cor.europa.eu/en/engage/studies/Documents/sustainable-public-procurement-food.pdf>

<sup>11</sup> Oberst, L. 2016. Denmark is on its way to becoming an organic country. Food Revolution Network. From: <https://foodrevolution.org/blog/denmark-organic-country/>

<sup>12</sup> Alt om Kost. n.d. The official Dietary Guidelines - Good for Health and Climate Danish Veterinary and Food Administration. From: <https://altomkost.dk/raad-og-anbefalinger/de-officielle-kostraad-godt-for-sundhed-og-klima/>

central kitchen that provides meals to all schools, where food is packed and transported to schools every day.<sup>13 14</sup>

Copenhagen House of Food (Fonden Københavns Madhus) was created in 2007 with support from the city council and has changed the way children were eating school lunches through the creation of so-called culinary *Food Schools* within the public school system.<sup>15</sup>

Copenhagen *Food Schools* are designed to:

- Educate students on Denmark's gastronomy.
- Be the tool to solve inequality in health, making sure everyone can have access to tasty and healthy food regardless of social status or economic situation.
- Gradually integrate the food strategy of the city: healthy, green, and sustainable.<sup>16</sup>

*Food Schools*:

- Provide around 5000 meals per day.
- The schools are decentralized organizations and production centres, occasionally receiving central support and development from the city's municipality.
- Each school consults private professionals on the menu's gastronomy.
- The food is 90 to 100% organic, seasonal, and cooked from scratch, pushing the limitations of public food procurement rules and markets.
- There are venues with tables for children to eat together.

The *Food School* not only provides healthy, nutritious meals for students but also aims to increase food literacy and use food as a learning space for the students.

Food education: The school focuses on building a sense of democracy and increasing student food literacy by educating them and allowing them to participate in the menu planning and daily food-producing process with the chefs. A team of 6 students will spend the day with professional chefs, working and giving ideas to the food-producing process, from preparing to serving.<sup>17</sup>

*Food Schools* in numbers:

- There are currently 16 *Food Schools* in Copenhagen, which includes 12 *Folkeskolers* (public schools) and 4 Danish special schools for children who are diagnosed with special conditions (ADHD, autism, etc.).<sup>18 19</sup>

---

<sup>13</sup> Haynes, M. 2019. The Local. 17 May 2019. From:

<https://www.thelocal.dk/20190517/the-danish-schools-where-the-kids-make-the-dinners/>

<sup>14</sup> Originally a large municipal school food project called KØSS initiated the first central commissary kitchen in Copenhagen, evolving into EAT. See Mikkelsen, B.E. and Olsen, T.D. 2009. Organic foods in Danish municipal school food systems-. From:

[https://orgprints.org/id/eprint/16702/1/Organic\\_foods\\_in\\_Danish\\_municipal\\_school\\_food\\_systems.pdf](https://orgprints.org/id/eprint/16702/1/Organic_foods_in_Danish_municipal_school_food_systems.pdf)

The Appendix has more information on the KØSS program.

<sup>15</sup> Haynes, M. 2019. The Local. 17 May 2019. From:

<https://www.thelocal.dk/20190517/the-danish-schools-where-the-kids-make-the-dinners/>

<sup>16</sup> The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From:

<https://www.youtube.com/watch?v=KXUhNSgJGPo>

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> Houlberg, K. Andersen, V.N., *Bjørnholt*, B., Krassel, F., Pedersen, L.H. 2016. Country Background Report-Denmark. Danish Institute for Local and Regional Government Research (KORA) for the Danish Ministry of

- 5000 students with access to school food at the *Food Schools* (2017).<sup>20</sup>
- The food is 90% organic (2019).<sup>21</sup>
- Today, approx. 9,000 students school meals daily. In 2007, the number was approx. 3,000 (2019).<sup>22</sup>
- These kitchens are run by a chef or cook who has a team of between four and eight children from grades 4 to 8, who work in the kitchen on food preparation each week.<sup>23</sup>
- Across the city, these kitchens produce 4,000 portions of food every day made from around 90 percent organic ingredients.

The *Food Schools* are different based on how they produce food. Each school decides individually what to put on their menus. Students participate through apprenticeships in the kitchen with the chefs, and *Food Schools* have canteen spaces where all students can sit together and enjoy their food. While the EAT schools have a fixed menu for three months at a time. They also portion size their food, put it in boxes, and deliver them to the classrooms where students eat, like a traditional Danish model.

It has been decided that *Food Schools* be the new school model for future investment. However, *Food Schools* in the City of Copenhagen do not work with post-secondary schools or external organizations. There are only a few high schools and colleges that help in providing organic and vegetarian food for students. This demonstrates a need for a national school food program.

Schools in Copenhagen have a diverse culture and they take that into consideration when designing menus. Some schools may have a theme for their food each week to learn more and celebrate different cultures. Almost 100 percent of the meat served is halal butchered making it acceptable to more students.

At the same time, there are 53 schools that serve meals from centralized EAT kitchens in the city, providing approximately 6,000 meals per day.

EAT kitchens are commissary catering kitchens, mass-producing meals for distribution to schools. At EAT:

- Dishes produced are mostly familiar Danish cuisines, mixed with some foreign and vegetarian ones. Two main dishes are produced each day, one of which is always vegetarian.

---

Education. OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review. From:

[https://www.oecd.org/education/school/10932\\_OECD%20Country%20Background%20Report%20Denmark.pdf](https://www.oecd.org/education/school/10932_OECD%20Country%20Background%20Report%20Denmark.pdf)

<sup>20</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 41. From:

[https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate)

<sup>21</sup> Haynes, M. 2019. The Local. 17 May 2019. From:

<https://www.thelocal.dk/20190517/the-danish-schools-where-the-kids-make-the-dinners/>

<sup>22</sup> Ibid.

<sup>23</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 41. From:

[https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate)

- Facilities are designed to provide for at least 30% of the city's students.
- Meals are almost finished in EAT's kitchens, then reheated and plated at the schools' kitchens.
- EAT crews are responsible for preparing the meals and include about 6 students. The more students in the EAT crew, the more meals are sold.
- EAT kitchens are logistically complex, hence expensive to operate. They involve production planning, menu planning, and meal development and must be up to the parent and student expectations, and the country's nutrition requirements.
- EAT kitchens are equally equipped and standardized (despite different capacities) so that non-culinary professionals can operate the kitchens. Detailed instructions and standard procedures are posted in the kitchens for food quality standardization and control.
- EAT kitchen staff is centrally employed.<sup>24</sup>

EAT in numbers (from 2017 and 2020):<sup>25 26</sup>

- 28,500 students with access to school meals at EAT schools (2017).
- Every day around 4000 to 6000 students have EAT meals (2020).
- 94% of food is organic in the EAT kitchen, which has the Organic food label in gold (from 2017).
- EAT is currently available at 45 schools, where we daily serve between 4-6000 meals.
- Every EAT meal is cooked from scratch in our EAT production kitchen. After that, the food is delivered to each of the schools, where our EAT staff make the final preparations, so a freshly prepared meal can be served to pupils (from 2020).

School food has received a significant boost in nutrition and culinary quality compared to the previous school food scheme, KØSS. This is mainly because EAT only serves whole meals made from scratch. There is a permanent challenge in maintaining the quality level when the food is produced in such large quantities and must be transported, reheated, and served in the schools.<sup>27</sup>

Student involvement in food production / serving takes place at both EAT and *Food Schools*. But while students in *Food Schools* have 'hands in the ball possession' and achieve food learning that way, food learning is largely absent in EAT (although students learn other skills such as planning and collaboration).<sup>28</sup>

---

<sup>24</sup> The Coalition for Healthy School Meals. 2021. Denmark's School Food Program Webinar. From: <https://www.youtube.com/watch?v=KXUHNsgJGPo>

<sup>25</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 41. From: [https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate).

<sup>26</sup> EAT School Lunch. n.d. From: [https://sluseholmen.aula.dk/sites/sluseholmen.aula.dk/files/arkiv/Download\\_filer/eat-infomateriale%202021%20eng\\_elsk.pdf](https://sluseholmen.aula.dk/sites/sluseholmen.aula.dk/files/arkiv/Download_filer/eat-infomateriale%202021%20eng_elsk.pdf)

<sup>27</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 43. From: [https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate).

<sup>28</sup> Københavns Generation Madhus. 2018. Københavns Madhus. Pg 13. From: [https://pure.au.dk/portal/files/125959985/K\\_benhavnsk\\_Madgeneration.pdf](https://pure.au.dk/portal/files/125959985/K_benhavnsk_Madgeneration.pdf) (translated by Google translate).

Despite Denmark's highly developed welfare society, the packed lunch culture persists in most towns, and food in schools mostly remains a parental duty.

Organic food procurement is an important goal in Copenhagen. Following the national mindset of food consumption and the city's sustainable goals, the city has decided within the nation's *Public Organic Procurement Policies (POPPs)*, a policy model which encompasses education and training of food service staff, procurement procedures, and change of attitudes, processes, routines, and supply chains, to aim for 90% organic in food purchasing.<sup>29</sup>

In 2016, public organic procurement in Copenhagen reached an average of 88 percent of the 80 000 meals served each day. It means that about 141.800 kg of organic food are served weekly, with a total yearly budget of EUR 40.3 million. The impact in terms of sustainability is hard to quantify. However, according to the calculation model employed by Organic Denmark, the modest appraisal of the municipality's consumption of organic milk on a yearly basis shows a saving of approximately 370.82 million of litres of ground water from being contaminated with pesticides. Other environmental aspects, such as increased biodiversity, improved animal welfare and decrease of chemical fertilizers are indirect benefits. The impact that the Organic Conversion Program has had on the Danish foodservice market is also difficult to quantify. However, it is noted that the organic food service market is experiencing explosive growth in recent years: the total turnover in organic food service has tripled since 2009.<sup>30</sup>

## Oversight and Challenges

Engaged stakeholders share responsibility for oversight of school meals. Nationally and regionally, food is linked to some of the UN-SDGs and is a politically emphasized objective to achieve in schools and the local community.

Copenhagen has done well developing their school meal program. However, it would be beneficial to expand it to secondary and possibly post-secondary students. This may demonstrate a need for a national school food program which, at minimum, will help with funding. Copenhagen's program can be used as a model for expansion nationally, allowing, of course, for local modifications.

There is also a need for teachers to learn more about food *bildung* and continue to develop Denmark's food culture and literacy.

---

<sup>29</sup> Organic on every table. n.d. IFOAM Organics Europe. From: <https://euorganic2030.bio/initiatives/organic-on-every-table/>

<sup>30</sup> Brief-15-Copenhagen-2017. 2018. Food and Agriculture Organization of the United Nations. From: <https://www.milanurbanfoodpolicypact.org/wp-content/uploads/2020/12/Brief-15-Copenhagen-2017.pdf>

## Appendix<sup>31</sup>

Copenhagen Municipality. In connection with a large municipal school food project (KØSS), a large central kitchen was established. This concept has now been updated in a new system (EAT). Food is produced and wrapped in the central kitchen and subsequently delivered to the individual schools. Here, the food is unwrapped by the teacher or students in charge, reheated and sold using small food stalls or kiosks as outlets. Schools receive food from and return leftover food to the central kitchen. Schools only pay for the food sold, and do not have any financial incentive to increase sales. The KØSS project, which comprises school food programs in Copenhagen, was established in 2000 as a joint effort with the municipality's Health and Care Administration and the Children and Youth Administration. One of the overall aims for KØSS was to promote students' concentration abilities and take in information by offering students affordable and nutritional lunches at school. The implicit goal was to develop good habits and a conception of good health in children in the younger grades. To the greatest extent possible, the food on offer is tailored to the tastes, appetites, and cultures of the students. KØSS makes use of a broad range of health promoting initiatives besides the school food programs themselves. For example, by providing teaching materials and food labeling that contain nutritional information, as well as fixing serving sizes to the needs of the average child. A website was constructed that allows parents to read about the various menus, organic initiatives, and strategies which the municipality is pursuing. Parents also have the option of ordering food for their children over the website. Each school chooses a teacher to be responsible for running the school food stall, who together with the sixth graders takes care of preparing and selling the food received from the central kitchen. Most schools do not have an actual cafeteria or dining facilities for the children. Instead, they have school food stall from which the students can buy food. Only five out of fifty-two schools have created designated dining facilities or cafeterias for their students. The daily operation of the municipality's school food program is managed to a great extent by a school food coordinator in the central kitchen, who decides how much food should be prepared, which type of food should be prepared and whether it qualifies as organic. Individual schools therefore do not have the opportunity to pick and choose. It is the municipality who outlines the overall framework and principles for the food prepared in the central kitchen. Furthermore, the municipal food expert and coordinator from the central kitchen is responsible for further training of schoolteachers in running school food stalls. In the next instance, these schoolteachers are responsible for teaching and instructing the students in running the school food stalls.

---

<sup>31</sup> Mikkelsen, B.E. and Olsen, T.D. 2009. Organic foods in Danish municipal school food systems-. Pg. 4. From: [https://orgprints.org/id/eprint/16702/1/Organic\\_foods\\_in\\_Danish\\_municipal\\_school\\_food\\_systems.pdf](https://orgprints.org/id/eprint/16702/1/Organic_foods_in_Danish_municipal_school_food_systems.pdf)