



In order to make the average Dane's' diet more sustainable, there need to be fewer animal products such as red meat and cheese and more plant products such as legumes on the plate, according to calculations from the National Food Institute.

Legumes. Colourbox

A sustainable diet is healthy for us as well as the climate

If we follow the national food-based dietary guidelines, reduce food waste, and cut down on red meat, alcohol, and sweets, we can significantly reduce our impact on the environment. The National Food Institute creates the science-based foundation for integrating sustainability into food-based dietary guidelines that are nutrient adequate - both nationally and internationally.

In the Western world, the diet accounts for a quarter of a person's environmental impact. Therefore, an altered diet is a step towards the UN's 17 Sustainable Development Goals.

Using data from the Danish National Survey of Diet and Physical Activity, also called DANSDA, researchers at the National Food Institute have calculated an average adult Dane's CO₂ emissions from food. The results show that 57 % come from animal products of which red meat such as beef, lamb, and pork accounts for half. 15 % come from plant products such as vegetables, fruit, cereals, and bread products.

Alcohol and sweets leave their mark on the climate

Many people follow the debate on how red meat is one of the worst climate sinners on our plate. However, surveys from the National Food Institute show that 24 % of the environmental impact is caused by sweets, sugary drinks, coffee, and alcohol. If Danes actually followed the food-based dietary guidelines, the diet would not only become more sustainable, but also healthier.

Even though the environmental impact of individual foods in different food groups varies, the environmental impact of animal products is typically 10-40 times higher per kilogram of food than the production of fruit, vegetables, grain products, and potatoes.

100 grams of red meat per week

An interdisciplinary research team with representatives from 16 countries has made recommendations for a sustainable and healthy diet. They suggest that we only eat 100 grams of red meat a week and increase our intake of nuts and legumes to more than what the Danish food-based dietary guidelines suggest. The interdisciplinary research team, which collaborates with the EAT-Lancet Commission on Food, Planet, Health, also recommends that sugar constitutes no more than 5 % of the daily energy intake.

"The challenge is to let health and sustainability go hand in hand, and adapt this to national conditions. For example, it is important to explore what the consumer would eat instead of meat, milk, and cheese, while ensuring that the diet is optimized in respect of sustainability and the intake of vitamins and minerals," Senior Researcher and Head of Group Anja Biltoft-Jensen says.

Moreover, the researchers at the Institute are also exploring and assessing the international literature within this area so that the guidelines can reflect the scientific documentation while making the guidelines actionable and targeted to different groups with different needs and preferences.

Sustainable food-based dietary guidelines of the future

According to calculations from the National Food Institute, the diet's environmental impact varies depending on what the consumer eats instead of meat and fish. The environmental impact is reduced by 20 % if the consumers replace meat and fish with plant products such as legumes and vegetable oils. But sustainability also depends on what type of foods you put in your shopping basket. Danish vegetables, grain, and fruit have a smaller environmental impact than rice, plant-based meat, nuts, and certain imported vegetables.

The CO₂ emission is not the only relevant issue. Other factors, including land utilization, water consumption, and biodiversity have a significant impact as well. Therefore, the researchers at the National Food Institute collaborate with Aarhus University in an international research project (SUSFANS, Sustainable Food and Nutrition Security) around data and models that can calculate the sustainability of foods.

Until more results are available, it is a good idea to follow the official food-based dietary guidelines. This is the first step towards doing something good for the climate and ourselves.



The National Food Institute regularly conducts the Danish National Survey of Diet and Physical Activity, which show what we eat and our level of physical activity.
Cucumber. Colourbox

Mapping the dietary habits of Danes

To gain an insight into the dietary habits of Danes, the National Food Institute has conducted the Danish National Survey of Diet and Physical Activity, DANSDA, among children and adults since 1985. Since 2000, the Institute has also collected data on Danes' physical activity and weight.

Until now, data from 18,000 Danish children and adults are included in the surveys.

DANSDA is a national, representative, cross-sectional survey based on a simple, random sample of children and adults collected from the Danish Civil Registration System.

In addition to registering their dietary habits and physical activity, the participants are also asked about their social background, eating habits, physical activity, and consumption of dietary supplements in two personal background interviews.

The survey period covers the whole calendar year. For each participant, data on eating habits and physical activity are collected every day for a week. As the total collection of data covers a long period of time, it is possible to analyse trends over time.

DANSDA is used in a wide range of tasks, including advisory tasks and research, both nationally and internationally, and in teaching.

Do the Danes comply with the official food-based dietary guidelines and nutritional recommendations? What is the effect of health-promoting initiatives? And to what extent are Danes exposed to a particular risk through their diet, e.g. from unwanted substances such as pesticides or acrylamide? These are some of the questions, which DANSDA helps to answer.

“The ambition is that the National Food Institute’s research and scientific advice to authorities will contribute to the food-based dietary guidelines ensuring that a sustainable diet is also healthy for all population groups, and that more Danes will eat according to the food-based dietary guidelines and thus eat more sustainably.”

Anja Biltoft-Jensen
Senior Researcher and Head of Group