



Cheap seduction that makes you sick!

Why ultra-processed foods need labelling

In May 2020, the EU Commission presented an ambitious strategy for a sustainable transformation of our food system: The **Farm-To-Fork Strategy**¹. It is a new, comprehensive attempt to bring about the often called for systemic change in our food system, covering the whole food chain - from farming, cultivation and animal husbandry, storage, processing to retail and packaging.

The strategy, which will later be followed by legislation, opens up opportunities to improve our lifestyles and health, better protect our environment and achieve social justice from farm to table. I warmly welcome this initiative as I am convinced that food is the center and basis of our being. Its quality starts with the fertility of the soil and ends with its preparation. **The creation of a sustainable food system could be a support for the environment and biodiversity, but also for many small farmers and food artisans. People's health and, therefore, quality of life would increase, and healthcare costs for society would decrease.**

In addition to production, the strategy focuses on the distribution and consumption of food. The Commission's strategy states: **"Around 20% of all food produced is thrown away, while obesity is on the rise.** More than half of adults are now overweight, contributing to a high incidence of diet-related diseases (including various cancers) and an increase in related health costs. In general, **diets** in Europe are not in line with national dietary recommendations, and the 'food environment' does not ensure that the healthy alternative is always the easiest."

To improve nutrition, increase transparency and sustainability, and to help diners make the right choices, the EU Commission plans to present a **proposal for a mandatory, EU-wide harmonised front-of-pack nutrition labelling system for food** by the end of 2022.

¹ European Commission (2020). From farm to fork: <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/farm-fork>

This will be designed to enable comparison of processed foods in the same category, such as different brands of frozen foods or breakfast cereals. Consumers should then be able to quickly identify sugary and fatty foods, for example. As the F2F strategy correctly identifies: "Despite growing urbanisation, people want a closer relationship with their food, which should be fresh, less processed and sustainably produced."

The way food is produced, processed and prepared and how it is integrated into our diets and, ultimately, our lives is essential for the evaluation of food as well as dietary styles.

With the level of industrial processing of food since the 60s/70s, chronic inflammatory diseases have been steadily increasing. The devastating consequences of our broken food system are cardiovascular disease, hypertension, diabetes, obesity and chronic inflammatory bowel disease². This is why I advocate a harmonised, obligatory nutrition labelling which takes into account the degree of the processing of food. The reasons for this are set out in this position paper.



Furthermore, I would like to emphasise that traditional and cultural knowledge of food and dishes, as well as the sensual and practical experience of making and eating food, offer additional important ways to understand the relationship between food and our consumption behaviour.³ Traditional handicrafts and peasant traditions of cultivation and processing methods are often the basis for this.

Food supply today

People like to say that our food is safer, healthier and more diverse than ever before in human history. When we look at the colourful, packed shelves of any supermarket, we would tend to agree with this statement immediately. The average supermarket contains 12,000 products.⁴ But this ostensible abundance of food turns into an illusion on closer inspection; in the last fifty to a hundred years, according to UN estimates, we have lost about 90% of our species and seed diversity - today, 75% of the world's food needs are met by about

² Monteiro et al. (2017). The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing: <https://www.cambridge.org/core/journals/public-health-nutrition/article/un-decade-of-nutrition-the-nova-food-classification-and-the-trouble-with-ultraprocessing/2A9776922A28F8F757BDA32C3266AC2A>

³ Scrinis (2013). Nutritionism - The science and politics of dietary advice. Columbia University Press.

⁴ Statista (2020). Statistics on food discounters: <https://de.statista.com/themes/1291/food-discounters/#:~:text=W%C3%A4hrend%20Superm%C3%A4rkte%20averag%20fast%2012,000,Food%2DArtikeln%20sehr%20eineschr%C3%A4nkt%20ist>

a dozen plant varieties and five animal breeds⁵. The world market for agricultural products is dominated by wheat, soya and maize, followed by sugar, palm oil and rice.⁶ In addition, convenience products and highly processed foods have gained the upper hand and are available in all shapes and colours.

The pitfalls of convenience foods

Through manipulation of our taste buds, marketing and industry-funded studies, shoppers have been told that convenience products are healthy and safe. However, as mentioned at the beginning, incidents of chronic inflammatory diseases have increased steadily with the level of industrial processing of food since the 60/70s. The devastating consequences of this broken food system are high blood pressure, diabetes, obesity and chronic inflammatory bowel disease.⁷



Unfortunately, the definition of healthy food is still often rather narrow and very much one-sided. Simply being hygienically free of pathogenic germs does not make food healthy and appropriate for our metabolic needs. A large proportion of people now know that the diet in industrialised countries, with its ever growing proportion of convenience foods, is too high in sugar, salt and fat. But there is also a tremendous difference between fresh, home-prepared food and its industrial counterpart. For example, an industrial-prepared Cordon Bleu (a kind of breaded cutlet stuffed with cheese and ham), ready to eat in about five minutes when heated in the microwave, contains over 25 different ingredients⁸. The homemade version is made with just a few ingredients: meat, ham, cheese, egg, breadcrumbs and flour.⁹

What value do we assign to these highly processed foods and what are the differences between these two Cordons Bleus?

⁵ FAO (1999). What is happening to agrobiodiversity? : <http://www.fao.org/3/y5609e/y5609e02.htm>

⁶ Heinrich Böll Foundation (2017). Agrifood Atlas: https://www.boell.de/sites/default/files/agrifoodatlas2017_facts-and-figures-about-the-corporations-that-control-what-we-eat.pdf?dimension1=ds_corporate_atlas

⁷ Monteiro et al. (2017). The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing: <https://www.cambridge.org/core/journals/public-health-nutrition/article/un-decade-of-nutrition-the-nova-food-classification-and-the-trouble-with-ultraprocessing/2A9776922A28F8F757BDA32C3266AC2A>

⁸ Billa online shop (02.06.2021). Chicken Cordon Bleu https://shop.billa.at/produkte/billa-huehner-cordon-bleu/00-318508?gclid=Cj0KCQjw2NyFBhDoARIsAMtHtZ5-yvIsFGAFO2EyGkBMGo76nA5sU4pfRFXBo_1NkZnWn__5i5-joRoaAgY8EALw_wcB

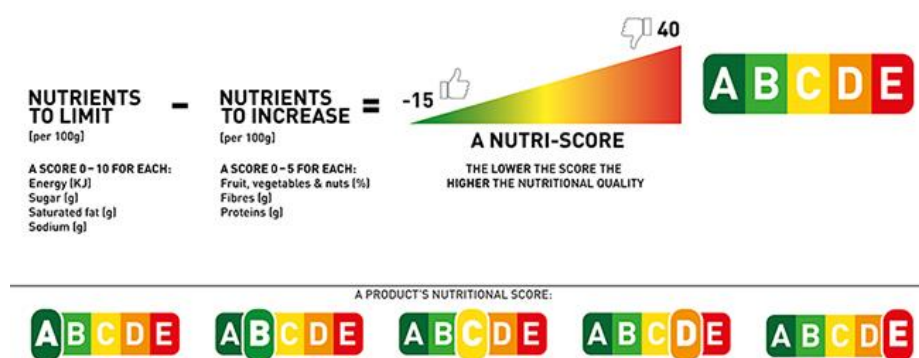
⁹ Recommended in this context: arte (2020). "Mealtime! Hexenküche Lebensmittelindustrie": <https://www.arte.tv/en/videos/091150-000-A/meal-hexenkueche-food-industry/>

It's not just about salt, sugar or fat - What should a good food labelling system look like?

There are already a few different approaches in existence today. Arguably, the best-known labelling system to date, alongside the British traffic light model¹⁰, is the so-called Nutri-Score.¹¹

The reductionist view: Nutriscore

The basic principle of the Nutri-Score is simple: superficially "good nutrients" are added up with superficially "bad nutrients", resulting in an "overall grade" from A to E.



Source: www.tateandlyle.com



Unfortunately, it is not quite that simple. For example, a homemade dessert may contain a lot of sugar, but it can be well prepared and easily metabolized by our bodies, as long as we do not eat it every day or in large quantities. But in comparison to an ultra-processed ready meal from the same food category, the latter contains additives that our digestive system

¹⁰ British Nutrition Foundation (2021). Helping you eat well: [https://www.nutrition.org.uk/healthyliving/helpingyoueatwell/324-labels.html?start=3#:~:text=Using%20the%20government%20scheme%2C%20a,calories%20and%20kilojoules\)%20it%20provides](https://www.nutrition.org.uk/healthyliving/helpingyoueatwell/324-labels.html?start=3#:~:text=Using%20the%20government%20scheme%2C%20a,calories%20and%20kilojoules)%20it%20provides)

¹¹ Consumer Central (2020). Nutri Score: <https://www.verbraucherzentrale.de/knowledge/food/labelling-and-ingredients/nutriscore-expanded-neutral-labelling-now-allowed-36561>

cannot cope with very well. Such ingredients can even damage our gut microbiome.¹² Unfortunately, the Nutri-Score does not address such subtleties: instead, a diet coke gets an overall grade of B, while organic fruit juices without artificial additives or added sugar only fall into groups C or D.¹³

Attention to food additives in Europe is almost always limited to issues of toxicity and other forms of contamination. By contrast, the equally important issue of adulteration, including the use of cosmetic food additives (flavourings, colourings and emulsifiers) to make combinations of ingredients - such as cheap processed oils, refined sugars and starches with sodium - palatable and attractive, is regularly neglected.

For organic processed products in particular, a focus on pure nutritional values has a detrimental effect, as legal requirements deliberately restrict the use of additives such as salt, fat or sugar substitutes or flavourings and colours for organic products. For example, five times more additives are allowed in conventional food production than in the organic sector. Moreover, the differences in exposure to pesticides and other environmental toxins are also not taken into account.¹⁴

Organic food, the promotion of which is an explicit objective of the farm-to-fork strategy, is based at its core on a naturalistic "let food be as natural as possible" approach and is an important first step towards natural eating.

The broader assessment: the NOVA system

Looking more closely at food quality as a whole, we see that simply reducing the assessment to individual nutrients or combinations of nutrients does not do justice to the complex interplay of "nutrition". After all, we are not just consuming a bundle of nutrients, but food or a meal consisting of a particular composition of different ingredients.

How, then, can we succeed in clarifying the differences between the natural and the highly processed Schnitzel - to take our example, the cordon bleu, again? A more holistic approach can be found in the 2019 study "*Ultra-processed foods, diet quality, and health using the NOVA classification system*" by the FAO, the Food and Agriculture Organization of the United Nations.¹⁵ This study presents a system for classifying processed foods into categories: the **NOVA System**.

¹² Chassaing et al. (2015). Dietary emulsifiers impact the mouse gut microbiota promoting colitis and metabolic syndrome: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4910713/>

¹³ Kayser-Bril (2020). Despite transparency, the Nutri-Score algorithm faces strong resistance: <https://algorithmwatch.org/en/nutriscore/>

¹⁴ EFSA (2021). The 2019 European Union report on pesticide residues in food: <https://www.efsa.europa.eu/sites/default/files/2021-04/6491.pdf>

¹⁵ FAO (2019). Ultra-processed foods, diet quality, and health using the NOVA classification system: <http://www.fao.org/3/ca5644en/ca5644en.pdf>

The **NOVA system divides food into four groups according to the degree of processing** (see graph below):

- Group 1 foods form the basis of the daily diet
- Group 2 foods are ingredients derived from Level 1 foods that have undergone little processing
- Group 3 foods are processed foods
- Group 4 foods are ultra-processed foods

Classification of foodstuffs according to the NOVA system



Source: www.sciencedirect.com

The group of "**processed food**" includes a wide variety of products: For example, soft drinks, sweet or savoury packaged snacks, chocolates, sweets (confectionery), ice cream or mass-produced breads and rolls, biscuits, pastries and cake mixes. It also often includes various breakfast "cereals", "muesli" and "energy" bars, which are actually advertised as particularly healthy.

"**Ultra-processed**" foods are defined (by NOVA classification) as preparations of ingredients, mostly used exclusively in the food industry, that are produced by a series of high-technology industrial processes. This includes, for example, the fractionation of whole foods into substances, chemical modification of these substances and the reassembly of these modified food substances by industrial techniques such as extrusion, moulding and pre-frying.

In addition, additives are added at various stages of the production process, the function of which is to make the final product palatable or hyper-palatable. The ingredients include in particular sugars, oils, fats or salt, which are generally combined. In addition, energy or nutrient sources that are not or

¹⁶ FAO (2019). Ultra-processed foods, diet quality, and health using the NOVA classification system: <http://www.fao.org/3/ca5644en/ca5644en.pdf>, P. 12

¹⁷ The Lancet (2019). The Global Syndemic of Obesity, Undernutrition, and Climate Change: <https://www.thelancet.com/commissions/global-syndemic>

rarely used culinarily, such as high-fructose corn syrup, hydrogenated or highly modified oils and protein isolates, are used. Additives are also added whose function it is to make the final product more palatable or appealing, such as flavours, flavour enhancers, colours, emulsifiers and sweeteners, thickeners and anti-foaming agents, and fillers. They also include additives that prolong shelf life, protect the original properties or prevent the proliferation of micro-organisms.

An FAO report on this product group states: "***The processes and ingredients used to produce ultra-processed foods are designed to create highly profitable products (low-cost ingredients, long shelf life, emphasized branding), convenient (ready-to-eat) hyper-tasty products that displace freshly prepared meals and meals from other food groups.***"¹⁶

The FAO study notes that these characteristics, combined with aggressive industry marketing strategies, contribute to overconsumption, while making the products highly profitable for the restaurant and food and beverage industries that dominate the global food system.

The FAO report recommends the following actions as a matter of urgency:

- **Public policies and measures should protect the long-established production, manufacture, distribution, sale and consumption of healthy food.** This requires a systematic examination of the behavioural, social, cultural, economic, political and environmental purposes and impacts of food systems and food supply, and of dietary habits.
- **Public policies and measures should promote fresh preparation of meals and reduce the production and consumption of ultra-processed foods.**

In January 2019, The Lancet, an internationally renowned research team, also published "*The Global Syndemic of Obesity, Undernutrition, and Climate Change*"¹⁷, the result of a three-year project involving 43 authors from 14 countries and a wide range of disciplines. It practically confirmed the WHO/FAO and Foresight conclusions that **the main reason for the rise in obesity and overweight is the inability of food systems to deliver healthy diets.**

Effects on health

The FAO report details studies that have linked the frequent consumption of ultra- processed foods to diseases and health risks including: obesity, higher risk of developing high blood pressure, higher likelihood of developing asthma and higher risk of developing cancer.

¹⁶ FAO (2019). Ultra-processed foods, diet quality, and health using the NOVA classification system: <http://www.fao.org/3/ca5644en/ca5644en.pdf>, P. 12

¹⁷ The Lancet (2019). The Global Syndemic of Obesity, Undernutrition, and Climate Change: <https://www.thelancet.com/commissions/global-syndemic>

One reason for this is the increasing depletion of the microbiome, the human gut flora. This is a development that has a direct connection to our modern-day eating habits:

Dr. Bernhard Kegel, for example, found in his book¹⁸ that indigenous peoples have a much richer microbiome than Europeans, partly because of their comparatively simple, energy-rich and at the same time low-fibre diet.



In addition, Erica Sonnenburg of Stanford University School of Medicine, USA, showed in a study that the gut flora of mice fed with a low-fiber diet was halved after four generations. The potentially negative influence of ultra-processed foods and additives on the microbiome was also shown in a study by Benoit Chassaing of Georgia State University, USA. He studied additives from industrial ice cream, i.e. E433 and E466. The result: mice showed an impoverished microbiome and a breached intestinal barrier. This led to inflammation and disease.

The list of evidence of research confirming the link between ultra- processed foods, technological aids and the negative impact on our gut health could be continued.¹⁹

My political demands

Harmonised, mandatory nutrition labelling is one good building block towards a sustainable food system in the EU. However, labelling needs to move away from excessive reductionism and **purely nutrient-centred dietary guidelines and labels**. That is why I call for:

- **an adequate inclusion of the degree of processing** (NOVA classification) as well as of all additives (type and number) and technical enzymes. Today, technical enzymes do not have to be declared at all.
- **sound legislation to restrict, as far as possible, the production of unhealthy and unsustainable food from the outset**. The number of authorised additives is outdated and needs urgent revision. Additives should be reduced to the bare essentials.
- **a holistic view of food**: the whole is more than the sum of its parts. The nutrient composition, the production and processing methods must be looked at in an integrated manner.

¹⁸ Cone (2016). Rulers of the world: how microbes rule our lives. Dumont.

¹⁹ Recommended in this context: arte (2020). "Our gut - the wonderful world of the microbiome": <https://www.arte.tv/de/videos/080499-000-A/unser-bauch/>

- **ongoing involvement of independent experts**, regular revision of the underlying algorithm of the food classification system and review of its implementation to ensure maximum transparency and verifiability. Such a body should be established at EFSA to ensure consistency with sustainability and health aspects in the authorisation process, thus extending it beyond food safety.
- the development of **tax incentives and models for internalising social costs** (true cost accounting models)^{20, 21}, since we know from studies that pricing is an important tool for initiating socio-ecological transformation.
- to promote and support a food system - from primary production to processing and trade - **that is overall highly adapted to people** and which consists of fresh, diverse unprocessed and natural foods that do not contain environmental toxins.

²⁰ Kurth et al. (2019). Securing the future of German agriculture sustainably: https://image-src.bcg.com/Images/The_future_of_German_agriculture_securing_tcm9-234154.pdf

²¹ Regionalwert AG Freiburg (2019). Richtig Rechnen: <https://www.regionalwert-ag.de/research-projects-of-regional-value-ag-freiburg/richtig-rechnen/>