



EUROPEAN VEGETARIAN UNION

20
23

PLANT-BASED
SUSTAINABLE
PUBLIC
PROCUREMENT
BEST PRACTICES



PLANT-BASED SUSTAINABLE PUBLIC PROCUREMENT (SPP) BEST PRACTICES

Current dietary patterns in Europe are leading to both health issues¹ and environmental degradation² and must be addressed urgently in order to achieve our global climate ambitions. The transition towards plant-based diets represents a major opportunity for the European Union (EU) and its Member States to address these multiple challenges. As shown by a substantial amount of studies, a more plant-centric approach can significantly reduce greenhouse gas emissions (GHG) while having positive impacts on human health³. This transition is in line with the EU Farm to Fork Strategy⁴ and the Beating Cancer Plan⁵.

Public procurement presents a powerful mechanism for promoting food choices that support **sustainability and better health**. This crucial tool must therefore be effectively used in order to facilitate a shift towards plant-based diets. This report aims to explore the numerous benefits associated with increasing the availability of plant-based choices in collective catering, while also highlighting existing initiatives that exemplify sustainability and inspire transformation.

DEFINITIONS

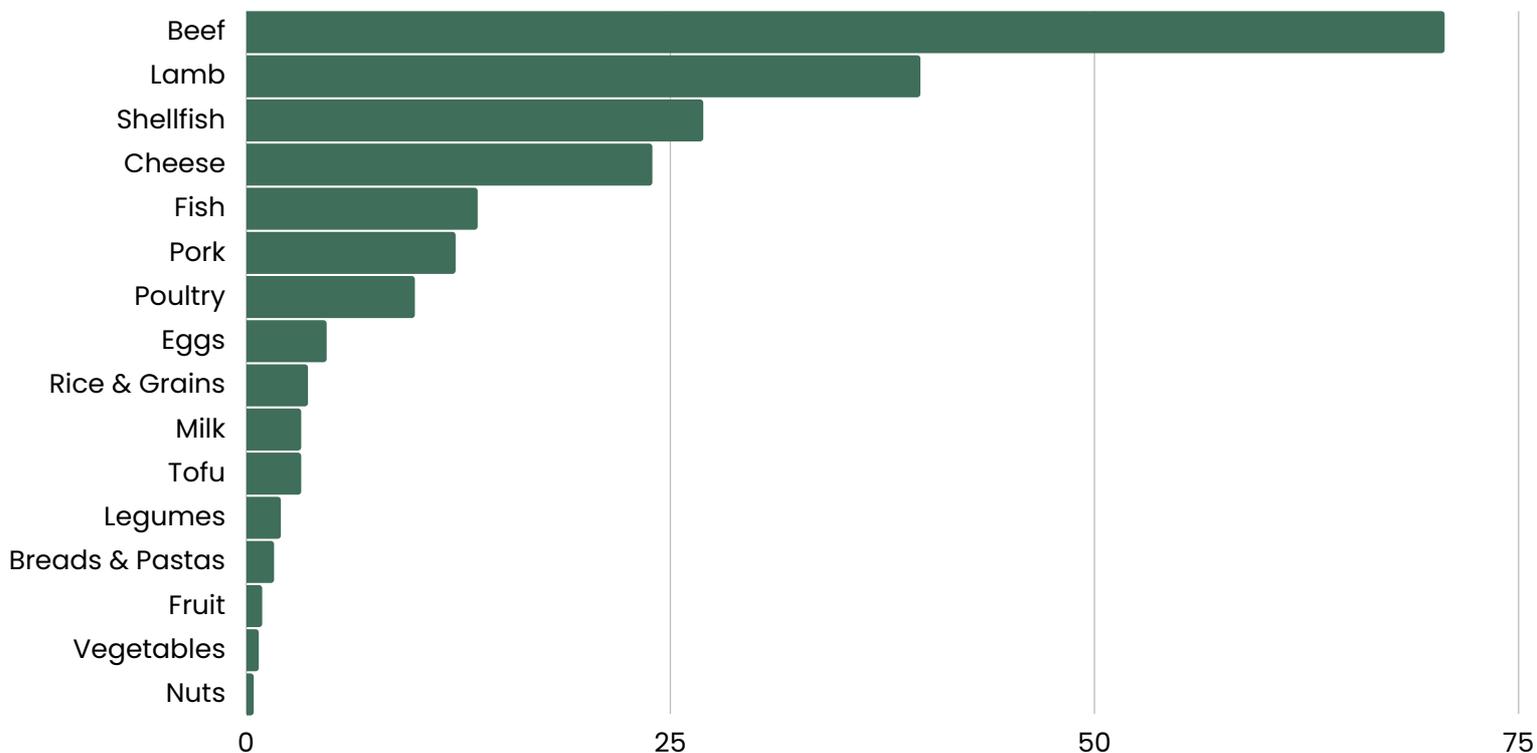
- **Plant-based diets:** A plant-based diet consists largely of a diverse range of plant-based foods - fruits, vegetables, plant-based proteins (including legumes, soybeans and nuts) - and little or no amounts of animal-source foods.
- **Plant-based foods:** Plant-based foods consist of fruits, vegetables, pulses, legumes, grains, nuts, seeds, fungi, algae and their derivatives.

BENEFITS OF PROMOTING PLANT-BASED FOODS THROUGH PUBLIC PROCUREMENT

1 Environmental benefits

It is now well documented that plant-based foods have a significantly lower environmental impact than their animal counterparts (see graph below). Therefore, the implementation of concrete targets to increase the share of plant-based foods emerges as **the most impactful measure to mitigate emissions from catering services**, as highlighted in the SAPEA report on sustainable food consumption published in 2023⁶. Replacing a non-vegetarian menu item with a vegetarian option is estimated to reduce GHG emissions by approximately 30%. A notable example of the positive impact of this shift was the University of Florence's Green Week, where the introduction of entirely plant-based menus for one week resulted in impressive savings of 60% in CO₂e emissions and 20% in water usage compared to the original food offering. To illustrate this further, this reduction of greenhouse gases is equivalent to the carbon emissions of a round trip by car between Florence and Berlin.⁸

■ Kilograms of GHG emissions per kg of food



Source: [Healthy diets for a healthy planet](#). United Nations.

2 Health benefits

Current European dietary patterns are characterised by an overconsumption of animal products and a lack of an adequate intake of fruits, vegetables and fibres. European per capita consumption of animal products has drastically increased since the 1960s, now representing more than twice the world average,⁹ a trend that is well beyond nutritional recommendations.¹⁰ On the other hand, only 12% of the European population consumes the recommended 5 daily portions of fruits and vegetables.¹¹

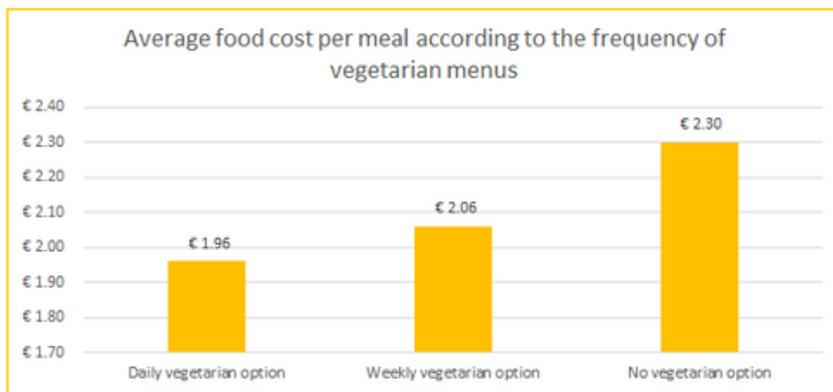
To address this imbalance and improve the nutritional intake of Europeans, it is crucial to promote the consumption of fruits, vegetables but also plant-based proteins such as legumes through sustainable public procurement. Pulses are indeed a balanced source of nutrients: they are high in proteins, antioxidants, fibre and diverse minerals.¹²

Furthermore, as vulnerable populations are more prone to unhealthy diets, **prioritising plant-based options through public procurement has the potential to address health inequalities** by granting wider access to healthy and sustainable meals.

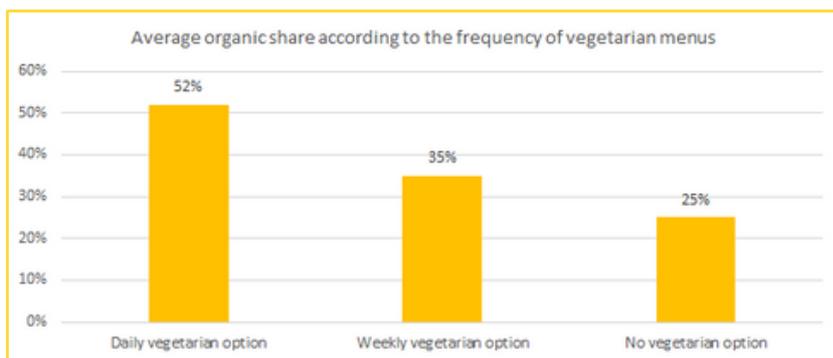
3 Cost savings

As **plant-based meals are generally cheaper** to prepare than options containing animal products, they allow for cost savings. According to a study by the Observatoire de la Restauration Collective Bio et Durable (Observatory of organic and sustainable collective catering) based on a cohort of 6,000 canteens, the daily whole-food vegetarian option is 25% cheaper than the conventional one.¹³ Additionally, plant-based foods have been shown to be **more resistant to price hikes** during the current inflationary period. From December 2021 to December 2022, meat prices increased on average by 17% while milk, cheese and eggs increased by almost 28%.¹⁴ Meanwhile, plant-based milk and meat alternatives remained stable in price, with both increasing by around 1%, allowing for better public budget planning.¹⁵ Cost savings achieved through the increase of plant-based options are in fact an important motive for school caterers, especially in periods of food price inflation.

Additionally, the affordability of plant-based meals enables caterers to **procure higher quality foods and ingredients**.¹⁶ For instance, the provision of plant-based meals has been linked to a higher share of organic products. Numerous initiatives have showcased that in order to balance the increased costs associated with organic products, caterers have transitioned towards incorporating more plant-based food items in their menus. This is the case for Malmö's canteen,¹⁷ Copenhagen¹⁸ and Lyon school canteens.¹⁹ Similarly to the increase of organic products accompanied by the uptake of plant-based foods, an augmentation of seasonal and local products was noticed.²⁰



Source: Observatoire de la restauration collective bio et durable. 2020



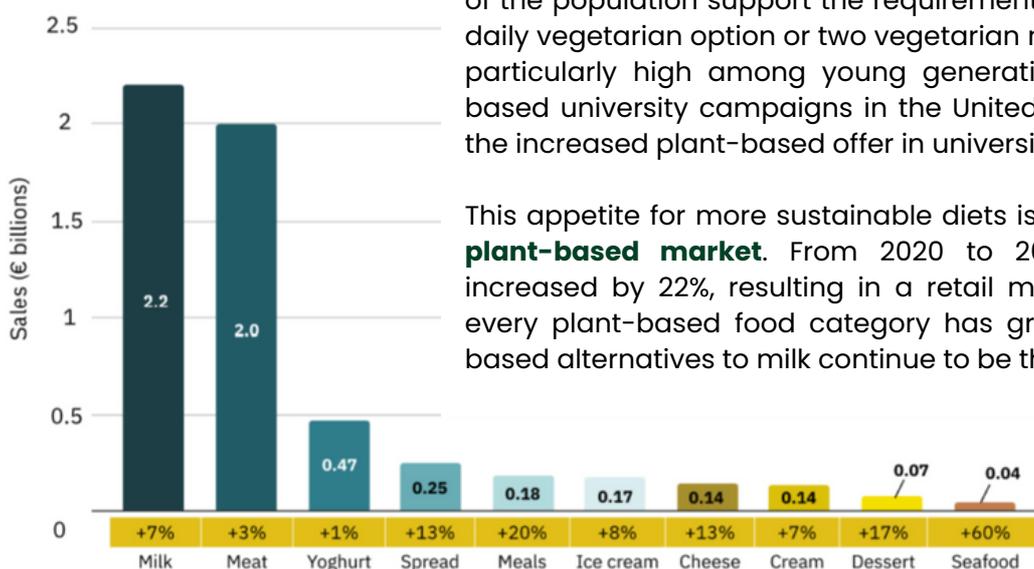
Source: Observatoire de la restauration collective bio et durable. 2020

As a result, **the uptake of plant-based foods in public catering is an opportunity for European farmers**. Using public procurement to promote plant-based consumption can create an important and stable demand for organic, seasonal and local products.

Furthermore, the increased demand for plant-based foods resulting from public procurement initiatives drives economies at scale. As production volumes rise, costs associated with these products can be reduced, making them more affordable and accessible to a wider range of consumers.²¹

4 Consumer demand

Implementing criteria and targets for the inclusion of plant-based foods in public procurement aligns with **consumers' willingness to move towards healthier and more sustainable dietary patterns**.²² In France, 81% of the population support the requirement for school canteens to offer a daily vegetarian option or two vegetarian menus per week.²³ The support is particularly high among young generations, as shown by the plant-based university campaigns in the United Kingdom,²⁴ and the success of the increased plant-based offer in universities in Berlin, Germany.²⁵



Europe plant-based food sales by category (in € billions) in 2022

Source: GFI Europe, 2023

This appetite for more sustainable diets is reflected in the **growth of the plant-based market**. From 2020 to 2022, plant-based food sales increased by 22%, resulting in a retail market worth €5,7 billion. While every plant-based food category has grown in the past years, plant-based alternatives to milk continue to be the most popular category.²⁶

BEST PRACTICES

Best practice examples of more plant-based public procurement can be found at national level in the form of legislation or guidelines, but also on a smaller scale in states, municipalities or institutions. The number of such initiatives is growing and many more are being developed. They include a wide range of changes towards a sustainable transition in collective catering. Many measures focus on a substantial increase in plant consumption and sometimes the introduction of daily mandatory plant-based options. In most cases, the changes are part of a comprehensive approach which can include other measures for healthier, more organic or locally grown dishes.



Country specific initiatives

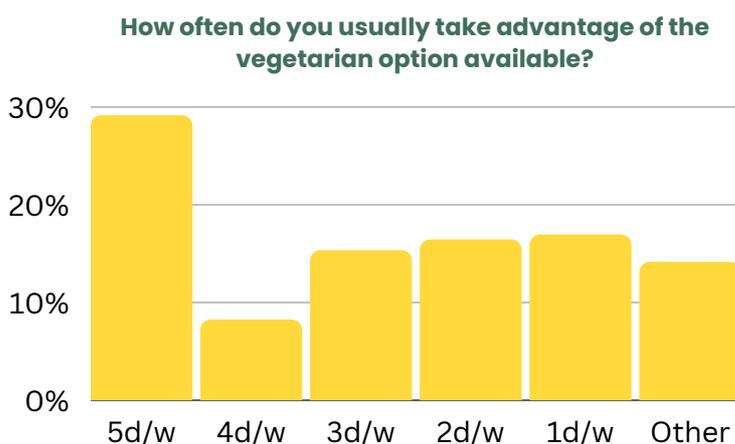
[Interactive map here](#)



EXAMPLE #1: The Portuguese law requiring public canteens to offer a plant-based option

In 2017, Portugal adopted Law nº11/2017, which established a **mandatory plant-based option in the daily menus of public canteens**.²⁷ According to the legislation, a public institution may be exempted from offering the plant-based option if there is no demand for it, and in case of low demand, catering services can establish a prior subscription system whereby requests for a plant-based option need to be indicated in advance to allow better planning. While these last two clauses can assist collective catering in complying with the law, it is important to manage them effectively to avoid their excessive utilisation undermining the new law, and to progressively transition towards its widespread implementation.

The widespread adoption of plant-based options in public catering services highlights the significant support for this initiative. According to a survey conducted by the AVP, **72% of respondents reported regularly choosing the vegetarian option**.²⁸ Moreover, in the case of those who do not have access to the plant-based option, the majority of respondents expressed their desire to choose it if it were made available.



Source: Associação Vegetariana Portuguesa. 2022.

The Portuguese experience with increasing the offer of plant-based options also reveals the **crucial need to train kitchen staff** in order to offer healthy, balanced, varied and appealing meals. Indeed, 29% of those who do not consume the vegetarian option indicated that this was because they find it not varied or diversified enough, while 24% do not find it appealing enough. It is crucial to support and train kitchen staff to make sure that the vegetarian dishes meet consumers' expectations. This approach not only boosts consumer satisfaction but also contributes to the long-term success and sustainability of implementing plant-based options in public catering services.

EXAMPLE #2: France's Climate and Resilience law

In 2021, France adopted the Climate and Resilience law,²⁹ thereby solidifying the way paved by the Egalim law in 2018. The 2021 law implemented several measures concerning collective catering:

The **daily vegetarian option** has been made compulsory in all canteens under the remit of the State that already offered several menu choices (hospitals, prisons, administrations, companies, CROUS,³⁰ etc).

The **weekly vegetarian menu** piloted under the Egalim law has been ratified and made compulsory for all public and private school canteens.

The implementation of a **daily vegetarian option on a voluntary basis** is proposed to all canteens managed by local authorities (i.e. the school sector) for a period of 2 years.

CROUS = Student support and services authority

While university canteens, hospitals and other state-run canteens are now obliged to offer a daily vegetarian option, this remains an option for school canteens, which in France are managed by local authorities. Nonetheless, **many local authorities have chosen to adopt a more plant-centric approach** by increasing the proportion of vegetarian dishes on their menus. For instance, numerous cities, including Bordeaux, Grenoble, Montpellier, Rennes, Strasbourg, Lille, Nantes and Lyon, have implemented a daily vegetarian option and/or introduced two vegetarian days per week (see below the example of Lyon) in schools canteens. In addition to the daily vegetarian option offered by state-run collective catering, some have gone further by offering a daily vegan option. This is the case at CROUS of Strasbourg.³¹

Lyon's school canteens vegetarian menus³²

Whereas the French Climate and Resilience law obliges cities to offer a weekly vegetarian meal in schools, Lyon is among the cities raising its ambitions in terms of plant-based offerings. Since September 2022, its local authorities have undertaken a change in their menu offerings. Two days per week, all pupils of the municipal schools are served fully vegetarian meals. For the two remaining days of the school week, children can choose to have an animal-based dish (containing labelled meat or sustainable fish) or two fully vegetarian meals.

While environmental considerations have been a driver of this initiative, it also aims at **strengthening inclusion**. In the past, students could only choose between a meat or a fish-dish. However, half of the primary school pupils did not consume meat, either for taste, family habits or religious reasons. Proposing a full vegetarian offer was therefore critical to meet all students' food preferences and needs.

The implementation of this offer stemmed from a **strong political will** from the new municipal team, which coincided with the renewal of the public procurement contract for school canteens. Ambitious targets in terms of vegetarian offerings but also for more organic and seasonal food were thus added to the new contract. Thanks to its kitchen staff's expertise in creating new recipes, the company that won the tender was able to propose a variety of appealing, nutritious and healthy food that could meet children's expectations.

As a further commitment to improve the sustainability, health and flavour profile of the food served across its school canteens, the city of Lyon is part of the **School Food 4 Change Network**, thereby contributing to an exchange of best practices with other like-minded municipalities.

EXAMPLE #3: Finland's commitment to transition towards plant-based diets

When it comes to public catering, Finland has played a pioneering role. As the first country to introduce free school meals in 1943,³³ it is now leading the way on the transition towards plant-based menus in public catering. National recommendations for lunches in schools,³⁴ kindergartens and preschools³⁵ recognise that a vegetarian diet can meet childrens' nutritional requirements, which has promoted the **provision of vegetarian meals in schools since the 1990s**. Today, vegetarian dishes are available in almost every educational institution in Finland. As for vegan meals, these are being developed thanks to the official dietary recommendations which **recognise a balanced vegan diet as safe** for all age groups.³⁶ Hence, many municipalities and cities, which are responsible for public institutions' food services in Finland, provide vegan meals in kindergartens and schools. The latest available data shows that 50% of all schools and kindergartens now offer vegan food. It is also worth mentioning that **vegan food is also provided in prisons and in the army**, with the exception of some specialised combat troops.³⁷

Helsinki's plant-based offer



Since 2007, Helsinki's school canteens have been required to offer vegetarian options. Three years later, **vegetarian meals were made mandatory** once a week, and twice a week in 2015.³⁸ One year after the implementation of this initiative, $\frac{2}{3}$ of Helsinki's inhabitants expressed their support.³⁹ To ensure that the vegetarian options were adapted to the taste and preferences of pupils, in 2017 the Municipal Council launched several **discussion panels with children and teachers**, which was key to ensuring plant-based menus could meet their expectations and thereby increasing their uptake.

This transition was also operationalised across the **University of Helsinki's** cafes and cafeterias, which are managed by the university's students' union. In order to improve the sustainability of the offer, beef was removed from the menu, which **decreased the carbon footprint of the meals served by 11%** - equivalent to savings of approximately 240,000 kg of CO₂ annually. Additionally, the provision of vegetarian and vegan dishes was increased.⁴⁰

Furthermore, in 2021, Helsinki decided to permanently change the dishes served during **city-run events**. Meat has been completely removed from the menu, fish is now restricted to only being served if it is responsibly sourced and local, and the share of plant-based foods has been increased. In addition, products purchased must be fairtrade labelled, and efforts to prevent food waste have been taken. This measure stems from **Helsinki City Council's 2019 decision to halve the use of dairy and meat products in food services provided by the City by 2025**, and from the procurement-related strategies outlined in Helsinki's Roadmap for Circular and Sharing Economy. The Roadmap aims at reducing the climate impact of food and decreasing the amount of natural resources used by the City.⁴¹

City specific initiatives

EXAMPLE #4: The City of Copenhagen⁴²

In 2007, the City of Copenhagen embarked on a sustainability journey. Several objectives were set, notably in the food sector. One of those was to reach 90% of organic food in public collective catering by 2015. To achieve this ambitious goal, the City created the **Copenhagen House of Food**, an independent non-commercial foundation in charge of the 900 catering facilities of the city.



As organic products are often more expensive, several measures were taken to limit the impact on meal prices on the city's budget. To this end, **investments in training and equipment** took place, efforts were made to **prevent food waste and a higher proportion of seasonal local plant-based foods were sourced**.

Building on the success of the project and the experience of the Copenhagen House of Food, the city is supporting caterers in other locations at both the municipal and national level to move towards more sustainable public food services and meal offerings.

Copenhagen's initiative demonstrates how a comprehensive strategy, backed by investment in training, waste reduction measures, and a focus on local and plant-based food, can lead to the achievement of ambitious sustainability goals.

EXAMPLE #5: Malmö's public canteens⁴³

Similarly to Copenhagen, Malmö introduced a Policy for Sustainable Development and Food in 2010. The goals of the initiative include serving 100 % organic food in Malmö's pre-schools, schools and care homes by 2020. At the same time the greenhouse gas emissions related to food procurement are meant to be reduced by 40 % (from 2002 levels).

Malmö didn't meet these targets on time, but the city remains the best municipality in Sweden when it comes to organic and climate-friendly food. The annual budget wasn't increased to implement the changes. Only a small amount of money was added for education and the training of staff.

Today, 70 % of the food served in Malmö is organic and the greenhouse gas emissions have been reduced by 30 % by offering vegetarian and vegan options.

EXAMPLE #6: Barcelona's healthier and more sustainable school canteens⁴⁴

In 2021, as the World Capital of Sustainable Food of the Year, Barcelona actively promoted more than 90 projects and 200 activities focused on sustainable food. Among these, schools participated in innovative projects to promote healthy, fair and sustainable food practices. In order to continue this legacy of enhanced sustainability, the city adopted the **Barcelona 2030 Sustainable Food Strategy**, which gave rise to a project to improve the quality, sustainability and health of school canteens. In this context, the World Health Organisation's (WHO) recommendations were implemented in schools, leading to a reduction of meat (especially red meat), accompanied by an increase in vegetables, whole grains and legumes. Additionally, the programme focused on the purchase of local products, thereby fostering the local economy. Initially encompassing 6 schools, the successful programme has now been expanded to 46 schools.



EXAMPLE #7: Bruxelles Environnement's Good Food canteen label⁴⁵

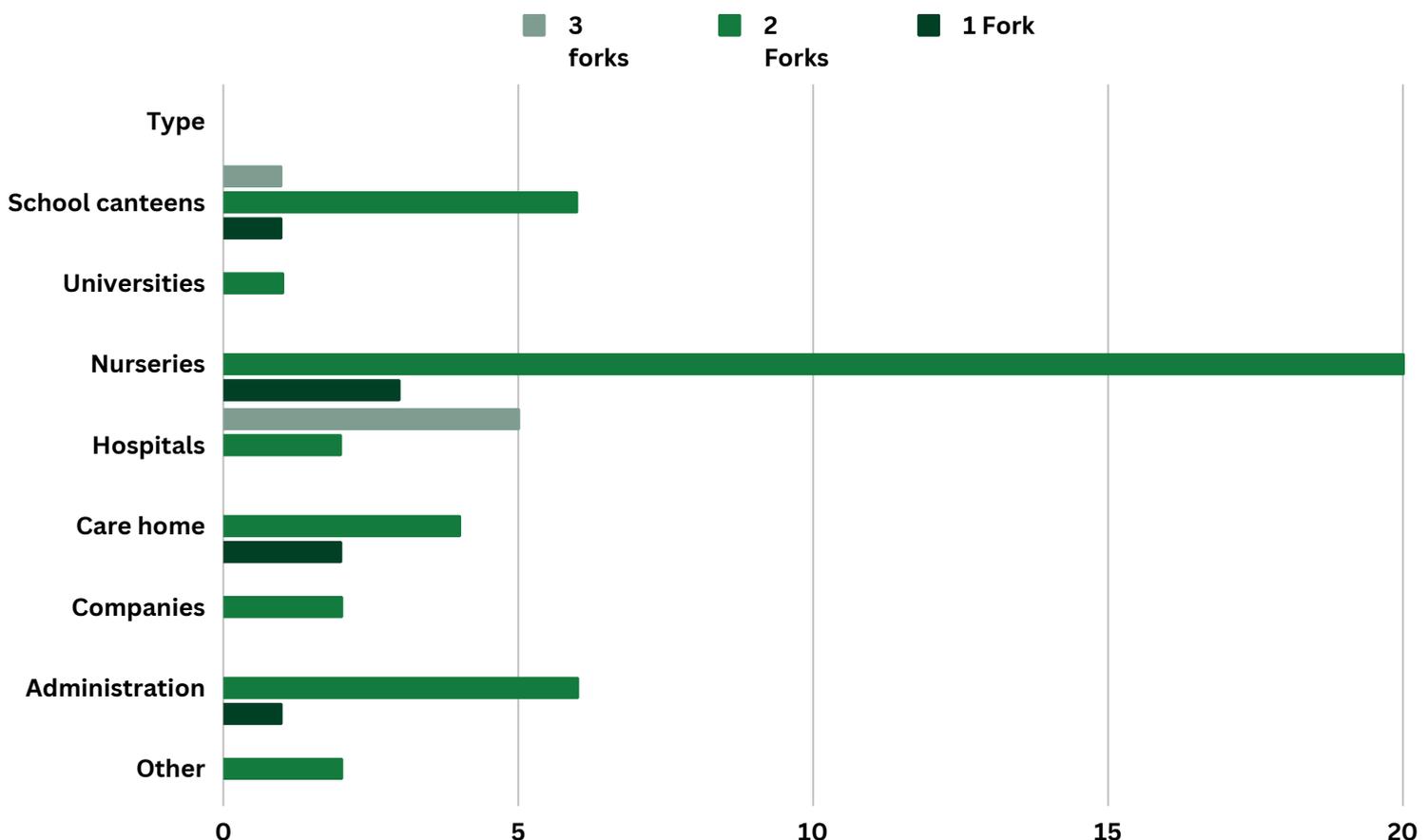


In 2016, Bruxelles Environnement – the administration for the Environment and Energy of the Brussels-Capital Region – launched its Good Food canteen label. The label is designed to recognise efforts made by collective canteens and to increase awareness and visibility of the sustainability of the canteens among staff and consumers. In order to accompany canteens in this transformation process, Bruxelles Environnement developed **a wide range of resources** such as training, workshops, communication tools, a calculation tool to measure the sustainability of dishes, and more.⁴⁶

The label consists of 3 levels ('forks') which indicate the canteen's level of commitment. To obtain the first fork, a canteen must meet the mandatory criteria. These include offering a vegetarian option, refraining from using fish from unsustainable practices, and ensuring appropriate portions of meat and vegetables. To obtain 2 or 3 forks, a canteen must additionally achieve a minimum score for the optional criteria (45% for 2 forks, 70% for 3 forks), which include an extended vegetarian offer or an entirely vegetarian offer, providing at least one vegan sandwich, only using organic meat, and serving a salad bar that exclusively contains plant-based proteins.

Similarly to other best practice examples cited above, offering more plant-based meals allows canteens to achieve **cost savings which can be invested in the purchase of more organic and local food**. As a result, the project ensures consumers have access to healthy and sustainable food without a price increase, thereby giving it a social dimension too.⁴⁷

In June 2023, a total of 58 canteens across the Brussels Capital Region were awarded the Good Food canteen label (see graph below). Among them, 10% achieved the highest level of the label, indicating a strong commitment to sustainable practices. 74% of the labelled canteens attained 2 forks and 16% have one fork as they take their initial steps towards implementing sustainable practices.



EXAMPLE #8: The Natürlich Gut Teller (Naturally Good Plates) initiative, Vienna⁴⁸

The 'Natürlich Gut Teller' (NGT) initiative was an important flagship project of the city of Vienna, developed in 2010. The aim was to highlight environmentally friendly dishes. An NGT plate consists of **at least ⅔ plant-based ingredients**, must contain **organic and seasonal products**, and cannot contain more than 90g of animal-based components per dish. In addition, animal-based products must be organic. In the period 2011 - 2016, 56% of the meals served were vegetarian, 24% contained local and sustainable fish and 20% contained meat. This successful project led to the publication of a book of 23 'naturally good plate' recipes to promote the recipes. Not only is the book suitable for large kitchens, but it also includes measurements for a 4-person household.⁴⁹



Regarding costs, the project demonstrated the financial benefits of more plant-based meals, as it generated **savings between €140 000 to €330 000 over the entire period of 2011-2016**. When combined with local purchases, the savings have the potential to be increased and free up funds to purchase high-quality food.

University specific initiatives

EXAMPLE #9: Berlin Universities⁵⁰

Since 2021, the 31 refectories and 15 backshops managed by the Studierendenwerk Berlin - the student union responsible for catering services of Berlin's universities - have undergone a significant transition towards an increased plant-based offer. In just two years, the **proportion of vegetarian or vegan dishes sold across these sites has risen from 60% in 2019 to 90% in 2023**.

The shift in the menu was driven by a **strong demand among students**. According to a survey commissioned by the student union, 14% of students at Berlin universities are vegan and 33% follow a vegetarian diet. Because of the high demand for plant-based products, all coffee machines now have plant-based milk alternatives on offer. The high demand is also shown by sales figures. From January to May 2023, the catering services of Berlin's universities sold 76% vegan options, 17% vegetarian meals and 7% meat and fish dishes. In addition to the wide range of plant-based food available in every canteen, Veggie 2.0 opened as Berlin's first 100% vegan canteen in 2019. From the start, it has been a magnet for all students, not just vegans.

The increase in vegetarian and vegan food options not only aligns with student preferences but has also led to budget savings for the student union. Given the higher purchase price of meat products in Germany, the increased proportion of plant-based foods has enabled cost reductions. Moreover, in the food inflation context, catering services have successfully managed to avoid price increases due to the more stable prices of plant-based products, ensuring students continue to have access to healthy and affordable food.

**Vegetarian or
vegan dishes sold
rose from 60% in
2019 to 90% in
2023.**

The success of the Studierendenwerk Berlin's initiative has garnered attention and inspired other universities and student unions, as demonstrated by the high number of inquiries that the student union continues to receive. The union has also been invited to present its initiative at several events and workshops, such as the Internorga exhibition, and has received the GV-Praxis Future Award for their food offering.⁵¹

The Studierendenwerk Berlin's project can serve as a model for other institutions, showcasing the positive impact of prioritising plant-based options in catering services on meeting the demands of a growing number of students seeking sustainable and ethical food choices.

EXAMPLE #10: The University of Cambridge⁵²

In the context of the University of Cambridge's effort to improve its environmental performance, the University Catering Services (UCS) – the university's in-house catering services – have worked to make their food offering more sustainable. To this effect, a **Sustainable Food Policy** was created in 2016, focusing on 4 areas where the UCS could make changes without exceeding their budget:

-  Reducing the consumption of meat, in particular ruminant meat.
-  Improving and increasing the availability of plant-based options.
-  Removing unsustainable fish from the menu.
-  Reducing food waste.

Thanks to this effort, the **UCS reduced its overall carbon emissions by 33% and its land use per kilogram of food purchased by 28% between 2015 and 2018**. The Sustainable Food Policy has reduced the catering services' emissions by 500 tonnes of CO₂eq each year, equivalent to emissions from driving 1,2 million miles by car, the distance of circulating the equator over 94 times.

EXAMPLE #11: The University of Florence⁵³

With 12 faculties and more than 60,000 students, the University of Florence is among the biggest in Europe. Since November 2022, the University has decided to improve the sustainability of its catering services by offering at least one plant-based first course, second course and exclusively plant-based side dishes.

In addition to integrating plant-based options into the daily menu, the University of Florence organises a Green Week, during which a 100% plant-based dinner is served every evening. This focused initiative has yielded impressive results, with the university achieving a **60% reduction in CO₂eq emissions and a 20% decrease in water consumption compared to the original menu**.

FRONTRUNNERS MAKING THE CHANGE HAPPEN

It is worth noting that most of the mentioned initiatives have been developed and implemented with the help of NGOs dedicated to supporting collective catering services in making their offer greener. Below is a list of organisations making that change happen, and more information on their projects:

- **Assiettes végétales**, France.
- ProVeg UK **School Plates program**, UK.
- **MenoPerPiù**, Italy.
- Grønn Framtid's **Green School Food program**, Norway.
- **Pestre Jidelny nesehnuti**, Czechia.
- ProVeg Belgium **'Jedi Veggie'**, Belgium.
- **Plant-based Universities** campaign, UK

Contact

European Vegetarian Union (EVU) e.V.
E-Mail: info@euroveg.eu
Website: www.euroveg.eu



References

1. WHO Regional Office for Europe (2022): The European Health Report 2021. Taking stock of the health-related Sustainable Development Goals in the COVID-19 era with a focus on leaving no one behind. WHO Regional Office for Europe.
2. European Commission, A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. 2020.
3. Among other studies: Springmann, M., Wiebe, K., Mason-D'Croz, D., Sulser, T.B., Rayner, M. & Scarborough, P. 2018. Health and nutritional aspects of sustainable diet strategies and their association with environmental impacts: a global modelling analysis with country-level detail. *Lancet Planet Health*, 2(10):e451–e461 ; Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., et al. 2019. Food in the Anthropocene: the EAT – Lancet Commission on healthy diets from sustainable food systems. *Lancet*, 393(10170):447–492. ; Poore, J. & Nemecek, T. Reducing food's environmental impacts through producers and consumers. *Science* 360, 987–992 (2018).
4. European Commission, A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. 2020.
5. European Commission, Europe's Beating Cancer Plan. 2021.
6. SAPEA, Science Advice for Policy by European Academies. (2023). Towards sustainable food consumption. Berlin: SAPEA. doi:10.5281/zenodo.8031939
7. Aleksandrowicz L, Green R, Joy EJM, Smith P, Haines A (2016) The Impacts of Dietary Change on Greenhouse Gas Emissions, Land Use, Water Use, and Health: A Systematic Review *PLoS One* 11:e0165797 doi:10.1371/journal.pone.0165797
8. Università di Firenze: meno 75% di CO2 con il nostro menù. *MenoPerPiù*. 2022.
9. Westhoek H., Lesschen J.P., Leip A., Rood T., Wagner S., De Marco A., Murphy-Bokern D., Pallière C., Howard C.M., Oenema O., Sutton M.A. 2015. Nitrogen on the table: The influence of food choices on nitrogen emissions and the European environment. *European Nitrogen Assessment Special Report on Nitrogen and Food*, Centre for Ecology & Hydrology, Edinburgh, UK, 70 p
10. Ibid..
11. 'How much fruit and vegetables do you eat daily?', Eurostat Nes. 2022.
12. Grela, E. R., and Samoli, W. (2017). Content of minerals and fatty acids and their correlation with phytochemical compounds and antioxidant activity of leguminous seeds. *Biol. Trace Elem. Res.* 180, 338–348. doi: 10.1007/s12011-017-1005-3
13. Observatoire de la restauration collective bio et durable. Résultats de l'enquête 2020. 2020.
14. European Commission, DG AGRI. Food Security. [consulted the 26/06/2023]
15. Europe plant-based food retail market insights. GFI Europe. 2023.
16. SAPEA, Science Advice for Policy by European Academies. (2023). Towards sustainable food consumption. Berlin: SAPEA. doi:10.5281/zenodo.8031939
17. Sustainable public procurement of food, European Committee of the Regions, 2018.
18. Ibid.
19. Du nouveau dans les cantines scolaires lyonnaises ! Lyon. 2022.
20. Observatoire de la restauration collective bio et durable. Résultats de l'enquête 2020. 2020.
21. Systemiq (2023): The breakthrough effect: how tipping points can accelerate net zero.
22. What consumers want: a survey on European consumer attitudes towards plant-based foods, with a focus on flexitarians. *Smart Protein*. 2021.
23. Hauser Morgane, Broc Rémy. La consommation de viande : quelles nouvelles tendances ? Harris interactive pour réseau action climat. 2023.
24. The Plant-based University Campaign is a UK student-led campaign for all university catering facilities to transition 100% of their menus to being plant-based. It is supported by Animal Raising.
25. Olterman Philip. Berlin's university canteens go almost meat-less as students prioritise climate. *The Guardian*. 2021.
26. Europe Plant-based food retail market insights, GFI Europe, 2023 Countries considered are Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Poland, Portugal, Romania, Spain, Sweden and the UK.
27. Opção Vegetariana nas Cantinas, Associação Vegetariana Portuguesa. [consulted on 28/06/2023].
28. Opção Vegetariana Nas Cantinas Públicas Um Retrato Da Realidade. Associação Vegetariana Portuguesa. 2022.
29. Article n°252 of the law n° 2021-1104 du 22 août 2021 portant lutte contre le dérèglement climatique et renforcement de la résilience face à ses effets.
30. The CROUS, or Centre Régional des Œuvres Universitaires et Scolaires, is a public institution linked to the Ministry of Higher Education and Research. Among other things, it is responsible for the university canteens.
31. A Strasbourg, les étudiant.e.s sont "bien en avance" sur le végétal. *Assiettes Végétales*. 2022.
32. Du nouveau dans les cantines scolaires lyonnaises ! Lyon. 2022.
33. Heli Kuusipalo and Outi Määttänen-bourke, Food for Health, Finish Nutrition Policy in Action. Ministry of Social Affairs and Health and Ministry of Agriculture and Forestry.
34. Syödään ja opitaan yhdessä – kouluruokailusuositus, Valtion ravitsemusneuvottelukunta (State nutrition advisory Council), 2017.
35. Terveystä ja iloa ruoasta – varhaiskasvatuksen ruokasuositus, Valtion ravitsemusneuvottelukunta (State nutrition advisory Council), 2018.
36. Vegan Diet. Finnish Food Authority. 2019. [consulted on 3/07/2023].
37. Heli Kuusipalo and Outi Määttänen-bourke, Food for Health, Finish Nutrition Policy in Action. Ministry of Social Affairs and Health and Ministry of Agriculture and Forestry.
38. Helsinki, Finland. Greenpeace. 2020. [consulted on 27/06/2023].
39. Ibid.
40. Beef off the menu at the University of Helsinki. *Yle News*. 2019.
41. City events to serve only seasonal plant-based food and responsibly sourced local fish – no more meat dishes and disposable tableware. Helsinki. 2021. [consulted on 27/06/2023].
42. Sustainable public procurement of food, European Committee of the Regions, 2018.
43. Sustainable food in Malmö. Malmö stad. [consulted on 18/09/2023]
44. Menjadors escolars més sans i sostenibles. Agència de Salut Pública de Barcelona. [consulted on 26/06/2023]
45. Label Cantine Good Food. Bruxelles Environnement. 2023. [consulted on 23/03/2023].
46. Cantines Good Food : Formations, helpdesk, outils. Bruxelles Environnement. [consulted on 23/06/2023].
47. Legrand Manon, Des cantines scolaires moins carnées? *La Ligue*. 2021.
48. Der "natürlich gut Teller". Die Umwelt Beratung. [consulted on 22/06/2023]
49. Ibid.
50. StudierendenWERK Berlin, Dining facilities.[consulted on 28/06/2023]
51. Exchanges with the StudierendenWerk Berlin. May 2023.
52. The University of Cambridge's Sustainable Food Policy. [consulted on 26/06/2023]
53. Università di Firenze: meno 75% di CO2 con il nostro menù. *MenoPerPiù*. 2022.