



Policy Brief 2:14

Excerpt from the Swedish report Konsumtionens gränser. (The Limits of Consumption)

Low-carbon School Meals: Acceptability, Strategies, and Potential

The carbon footprint of school meals can be reduced substantially without lowering pupil satisfaction, compromising nutrition recommendations, or increasing costs. Our research also shows that school meal policies tend to be more acceptable to the public than a consumption tax on high-emission foods. The Swedish municipalities that have been most successful in reducing their footprint have invested long-term in menu development, nudging initiatives, and other measures to reduce emissions from the food consumed in school canteens. However, it is uncommon to see clear goals and measures to ensure that school meals also support sustainable food habits outside school. Even though school meals make up only a few percent of total food consumption in Sweden, they can play an important role in the transition because they reach all children at ages when many food habits are formed.



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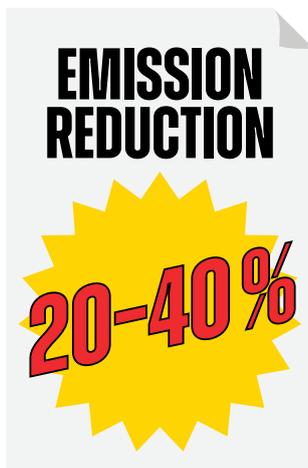
Low-carbon school meals with maintained acceptability

In our study, the carbon footprint of school meals was reduced by 20 percent during a seven-week period through recipe adjustments. The study was carried out in six compulsory schools (ages 6 – 15), in close collaboration with the municipality in Lund, Sweden. The reduction was achieved by lowering the share of beef and other emission-intensive ingredients, bringing the carbon footprint down to 0.57 kilograms of carbon dioxide equivalents per meal, close to the municipality's 2030 target of 0.5 kilograms.

Importantly, the new menu met nutritional recommendations for school meals and did not increase costs. Measures of pupil satisfaction, food consumption, and plate waste showed no significant differences compared to the regular menu. Providing pupils with information about the change through an edu-



Research shows that low-carbon school meals can be introduced without compromising nutritional quality, costs, or pupil satisfaction. Given the already fairly broad public support, this strategy is a feasible climate measure in schools.



cational film did not alter these outcomes, and no measurable differences in attitudes were observed compared to schools without the film. These results are consistent with earlier studies from the Swedish municipalities Botkyrka and Uppsala, where emissions were reduced by up to 40 percent.

Success factors in municipal strategies

In another study, we interviewed representatives from eleven Swedish municipalities that already have some of the lowest carbon footprints from school meals. They highlighted long-term work with gradual changes, clear support from steering documents, and strong backing from leadership. Several municipalities also emphasized competence development and staff engagement. Key strategies include recipe development to reduce high footprint ingredients, always offering a vegetarian option, and introducing all-vegetarian days. Nudging is also used to encourage plant-based choices, for example by placing vegetarian hot dishes and salads first in the buffet line and on menus. It is uncommon, however, for school meals to be connected to teaching about climate and sustainable food systems. Even though school meals represent only about three percent of Sweden's total food consumption, and ambitious school meal targets therefore have limited direct impact on national emissions, the broader role can be substantial. When pupils become familiar with low-carbon dishes that are tasty and nutritious, there is potential to influence norms and preferences beyond school and support more sustainable food consumption in society. In 2023, more than 40 percent of Swedish municipalities had targets to reduce the carbon footprint of their meals, but it was uncommon to see targets aimed at helping school meals contribute to sustainable food habits outside school.

Public acceptability and the way forward

New policy is often easier to introduce when public support is broad. In a third study, we examined support for different food-related measures through a survey of more than 3,000 participants in Sweden, France, and Poland. Roughly equal shares of respondents were positive and negative towards two school meal climate strategies aimed at reducing high-emission foods. Compared to other food policy instruments, support was higher than for a tax on high-emission foods such as beef, but lower than for labelling high-emission foods and subsidising low-emission foods. The two school meal strategies were introducing fully vegetarian days and developing climate efficient recipes by reducing high footprint ingredients such as beef and dairy. Both strategies are common in Swedish school kitchens, are often used in parallel, and received similar levels of support.

Acceptability was most strongly associated with awareness that beef has a high climate impact and concern about climate change. Support was also moderately higher among people with greater trust in political institutions, lower personal meat consumption, and younger age, while trust in science showed a smaller positive association. Other background factors showed weak or no clear association with support. Patterns were broadly similar across the three countries, although support for the school meal strategies was higher in Sweden and France than in Poland.

Pupil satisfaction remains stable when municipalities introduce low-carbon school meals.

Overall, the research shows that low-carbon school meals can be introduced without compromising nutrition, costs, or student satisfaction. Because public support is relatively broad, this strategy is feasible in both municipal and independent schools. To fully realize the potential, clearer goals are needed to ensure that school meals also support sustainable food habits beyond school and contribute to a broader transition towards more sustainable food consumption.



The new climate-efficient school menu.

A still image from Lund Municipality's [informational film](#) (in Swedish).



Further reading – or ask questions using www.greenchat.se/eng

- André, E., Eustachio Colombo, P., Schäfer Elinder, L., Larsson, J., and Hunsberger, M. (2024). [Acceptance of low carbon school meals with and without information. a controlled intervention study.](#) Journal of Consumer Policy
- André, E., and Larsson, J. forthcoming. Exploring the potential of climate strategies for school meals to promote low carbon food consumption
- André, E., Ejelöv, E., and Larsson, J. forthcoming. Public acceptability of school meal climate policies: findings from a survey in France, Poland and Sweden
- Eustachio Colombo, P., Patterson, E., Lindroos, A. K., Parlesak, A., & Elinder, L. S. (2020). [Sustainable and acceptable school meals through optimization analysis: An intervention study.](#) Nutrition Journal, 19(1), 61.

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For further information, see:
www.sustainableconsumption.se/en

Reference to this text

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