

While work on lab-grown meat has made headlines in recent years, similar work on fruit is less common. Scientists at Plant & Food Research in the city of Christchurch are aiming to change that by growing fruit tissue from plant cells that they hope will one day taste, smell and feel like real fruit. Researchers hope that the program will help safeguard the country's food security.

"Here in New Zealand, we're good at growing conventional horticultural crops," said Dr Ben Schon, the lead scientist for the Food by Design program at the government-backed Plant & Food Research, "but looking into the future, there's a lot of change coming in the world with population growth, increasing urbanisation and climate change."

The program aims to grow fruit tissue without the parts that are usually discarded like the core of the apple or the rind of an orange. Providing consumers with only the tissue of fruit will help reduce food waste, said Schon.

Lab-grown foods could play a pivotal role in sustainable agriculture but are still in very early stages of development, according to Dr Ali Rashidinejad, a senior food scientist who is not involved in the program.

Since lab-grown food is a completely new concept, once it is developed, it will then have to prove its safety to regulatory bodies likely through expensive and long clinical trials. "Overcoming such hurdles can take years if not decades," Rashidinejad said.

Consumers will also need to accept the practice; older generations might prove to be hesitant but research shows that younger generations are willing to try new foods if those foods offer health benefits while limiting environmental impact, said Rashidinejad.

The Plant & Food Research program, which started 18 months ago, focuses on cells from blueberries, apples, cherries, peaches, nectarines and grapes, but they warn that the end goal of harvesting something that is nutritional and enjoyable to eat is some years away and might not be attainable at all.

The technology would probably be suitable for growing fruit tissue within cities, said Dr Sam Baldwin, a strategy leader at Plant & Food Research, in the hope that it would reduce the cost and carbon emissions created when transporting food into urban centres.

However, it's unclear how the carbon footprint of such lab-grown fruit would compare to those grown using traditional methods, which may have to be transported long distances if imported.

The technology could also offset the food lost in weather events. Earlier this year, Cyclone Gabrielle, decimated parts of Hawkes Bay, an area known as New Zealand's fruit bowl. The cyclone came as many kiwifruit growers were preparing to harvest their crops.

*The Guardian, September 2023*

**Question 1** : Compréhension (80 words +/-10%)

According to the article, to what extent is lab-grown food the future of eating? Answer the question in your own words.

Lab-grown food can help feed a growing, increasingly urban population in a more challenging climate: it might be grown more sustainably as no transport would be required and it should produce less waste, and it is less vulnerable when natural catastrophes occur.

However such technological prowess might be unfeasible and will require a lot of time and money to achieve if it is possible. Then, people will need to be convinced, as they can be reluctant to even try such food. (82 words)

**Question 2** : Expression personnelle (180 words +/-10%)

Do you think technology is the best answer to the challenges brought by our changing climate? Answer the question in your own words and illustrate your point with relevant examples.

For centuries innovation has been mankind's solution to problems. However, is technology the best answer to the climate crisis?

Obviously technological progress can help face the challenges climate change implies: from electric vehicles to solar panels to heat pumps, countless examples show that we should rely on innovation to reduce our carbon footprint, and adapt to more extreme weather conditions. However, despite this progress, greenhouse gas emissions keep soaring and the situation is growing more dire every day, so it seems unrealistic to only count on innovation to fix it.

We therefore need to implement other, low tech measures to buy some time and allow engineering solutions like carbon trapping technology to mature and really make a difference, which may take decades. The most obvious, theoretically easiest way to do this, and what the IPCC recommends, is to change our consumer behaviours in order to reduce our impact: the less we consume, the less carbon we emit!

All in all, it would be unreasonable if not unethical to expect technology to fix climate change without mankind having to pay for the damage it has caused. Actually, relinquishing at least some of our comfort is inescapable. (195 words)

## Thème

Des piétons déambulent au milieu de pots de fleurs géants entre la boutique Omega et le grand magasin Selfridges. Cette image de synthèse donne un aperçu des plans du maire de Londres, Sadiq Khan, pour rendre Oxford Street piétonne à l'horizon 2027. La rue, fréquentée par les touristes depuis la fin du XIXe siècle, est actuellement ouverte aux bus et aux taxis noirs, censés avoir quitté les lieux dans trois ans.

« Oxford Street était autrefois le joyau de la couronne de la vente au détail au Royaume-Uni, mais elle a durement souffert durant la dernière décennie, a déclaré le maire. Nous devons agir urgemment pour redonner vie à la rue la plus connue de la nation. »

La fameuse artère a vu le nombre de visiteurs plonger pendant la pandémie de Covid-19. La crise du coût de la vie qui a ensuite frappé le Royaume-Uni lui a porté un rude coup.

[lemonde.fr](https://www.lemonde.fr), Septembre 2024 (adapté)

Pedestrians are strolling amid giant flower pots between the Omega store/shop and the Selfridges department store. (5) The/this computer-generated image gives/offers a glimpse of London Mayor Sadiq Khan's plans to make Oxford Street pedestrian-friendly/a pedestrian area by 2027. (6) The street, which has been visited by tourists since the late 19th century, is currently open to buses and black cabs, (7) which are due/scheduled/supposed to leave in three years' time. (4)

"Oxford Street was once the crown jewel of British retailing, but it has suffered badly over the last decade," said the Mayor. (6) "We need to act urgently to breathe new life into the nation's best-known street." (4)

The famous thoroughfare saw visitor numbers plummet during the Covid-19 pandemic. (4) The cost-of-living crisis that then hit the UK dealt it a severe blow. (4)