

Four reasons why filling our urban spaces with food growing places is a good idea

15/06/2021 Jess Davies, Professor of Sustainability Centre for Global Eco-innovation

www.lancaster.ac.uk/lec/rurbanrevolution @RurbanRev

Rurban Revolution Team





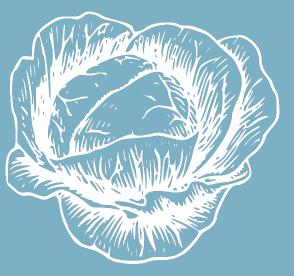








Four reasons why filling our urban spaces with food growing places is a good idea









Global greenhouse gas emissions from food production Our World in Data **Global Emissions** Retail: 3% of food emission 52.3 billion tonnes of carbon dioxide equivalents Packaging: 5% of food emissions Supply chain Transport: 6% of food emissions 18% ood processing: 4% of food emission Non-food: 74% Livestock and fisheries Livestock & fish farms 31% 30% of food emissions Methane from cattle's digestion ("enteric fermentation") Emissions from manure management Emissions from pasture management Fuel use from fisheries Crops for animal feed Crop production 27% Crops for human food 21% of food emissions 26% Land use for human food 8% of food emissions Land Use Food: 24% Land use for livestock Land use change: 18% Cultivated organic soils: 4% Savannah burning: 2%

- Food is a major contributor to climate change
- How we grow food makes up the majority of emissions
- And a big chunk of this is land related

Data source: Joseph Poore & Thomas Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Published in *Science*. OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritch



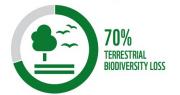
Agricultural land use is a major driver of environmental degradation, and land/soil degradation is a threat to the future sustainability of agriculture



Agriculture is responsible for 80% of global deforestation 80%



Drivers linked to food production cause 70% of terrestrial biodiversity loss



52% of agricultural production land is degraded

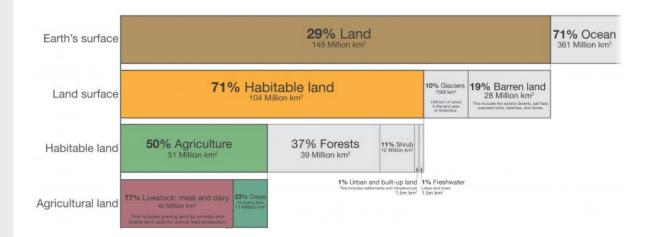






How many harvests left in our soils?

- 16% of soils in our recent global study had <100 years left
- Soils with lifespans shorter than humans found all over the world
- Soils are an almost non-renewable resource it can take 100s-1000s of years to form an inch of topsoil







Current dominant modes of food production are unsustainable

What might urban spaces have to offer?

- Food with less land take and deforestation?
- Food with less biodiversity loss?
- Food with less soil degradation?
- Food with more opportunities for water and nutrient use efficiency?



Our research: How much food (fruit & vegetables) could we grow in towns and cities?



2. Boosting availability of fresh fruit and vegetables is a good idea

2. Boosting availability of fresh fruit and vegetables is a good idea



• Vulnerable supplies: 84% of UK's fresh fruit and 50% of veg imported

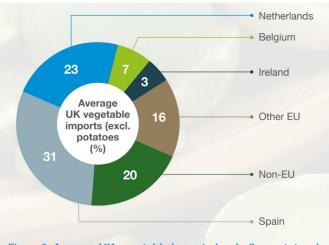


Figure 3. Average UK vegetable imports (excluding potatoes), 2013–2017

Source: HMRC



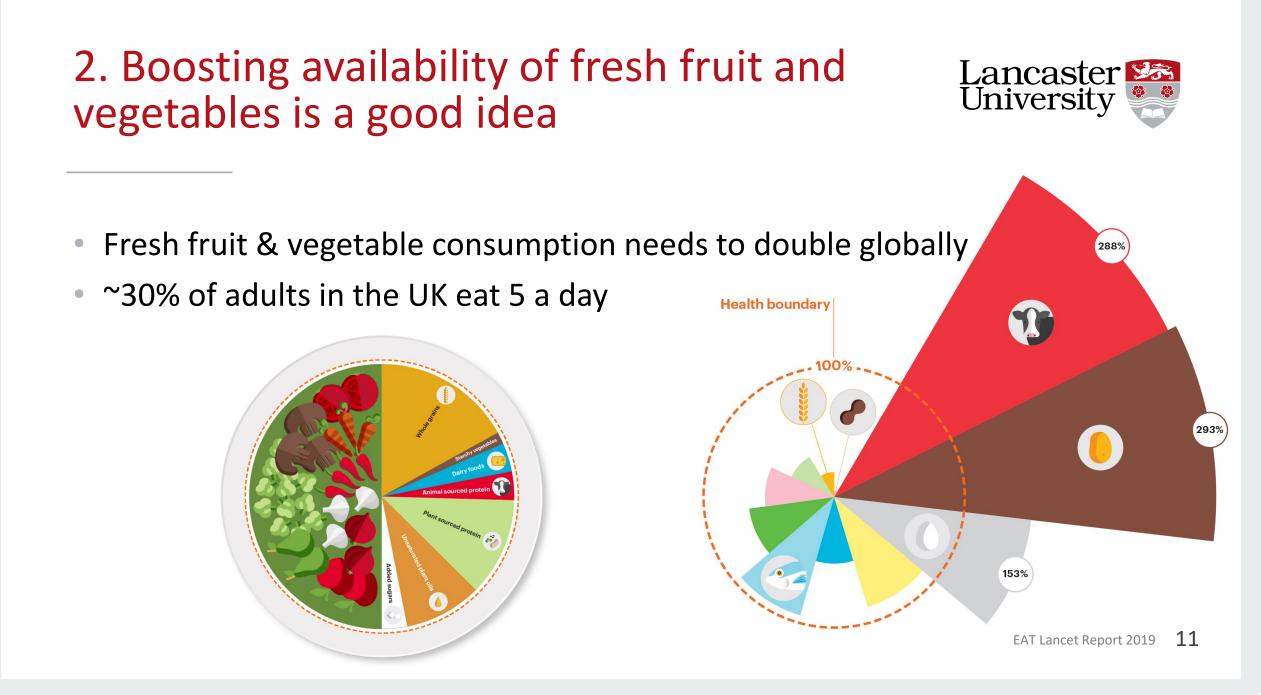
Fresh food is being left to rot undelivered as supermarket shelves and restaurant plates sit empty due to nationwide HGV driver shortage, fruit and veg boss says

- Supermarkets are finding it increasingly difficult to replenish their shelves
- A shortage of truck drivers in the UK is causing problems across retail firms
- Tim O'Malley of Nationwide Produce said fresh food is rotting in cold storage
- He said tax changes, Brexit and Covid are all contributing to the current crisis

By DARREN BOYLE FOR MAILONLINE PUBLISHED: 09:30, 9 June 2021 | UPDATED: 12:55, 9 June 2021



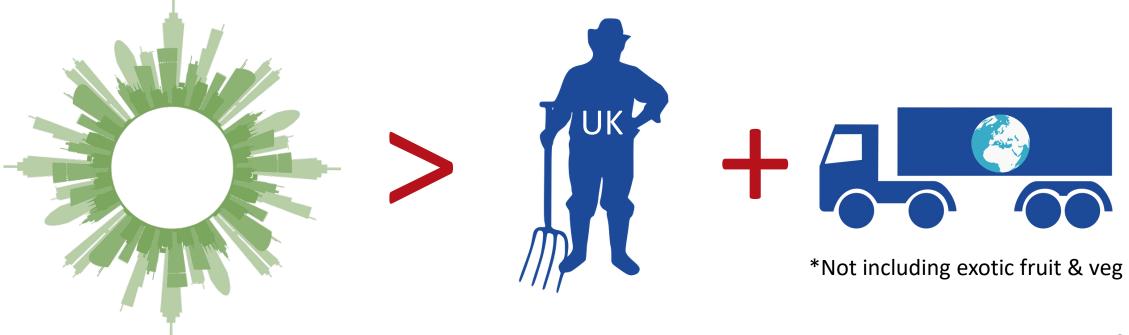




2. Boosting availability of fresh fruit and vegetables is a good idea

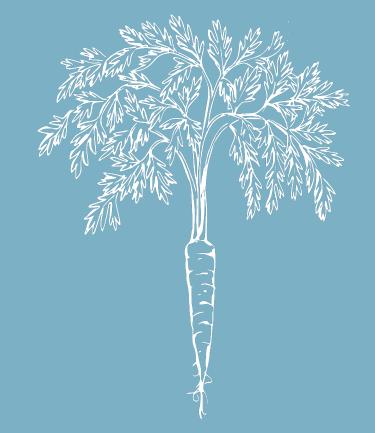


How much food (fruit & vegetables) could we grow in towns and cities?





3. Urban food growing can be good for our health



3. It can be good for our health



Does urban food growing lead to better dietary health?

- Quite possibly! Urban food growing associated with better dietary quality
- Caring more about what we eat: Urban food growing was linked to wanting to eat healthier and more sustainably
- Not only growers but those near to growing

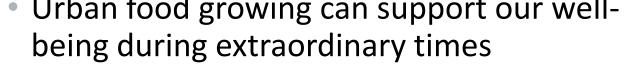


3. It can be good for our health

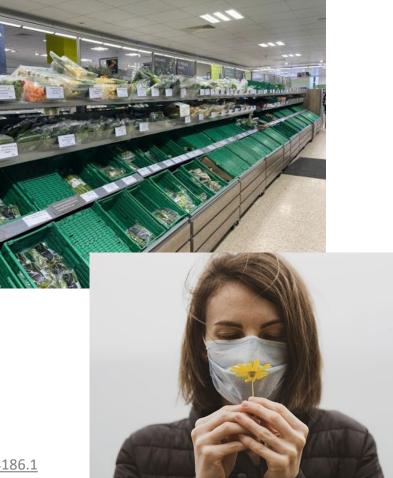


What effect did urban growing have on individuals during lockdown?

- During lockdown 1 those engaged in, or exposed to urban food growing:
 - Felt less stressed
 - Lower levels of food insecurity
- Urban food growing can support our wellbeing during extraordinary times





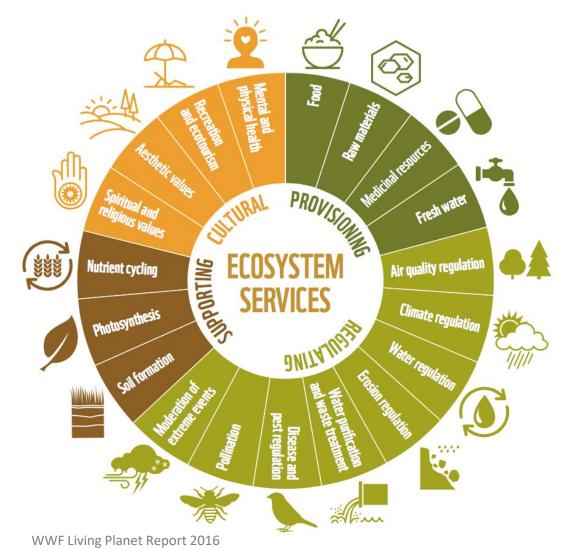




4. Urban food growing can be good for ecosystems (and in turn for us)

4. It can be good for urban ecosystems





- Nature provides us with all sorts of services
- Introducing green spaces in urban areas brings these benefits nearer to where most of us live
- Our research suggests that growing spaces provide as wide a range of ecosystem services as non-edible greenspaces
- There may be boosts to benefits where edible and non-edible planting is combined

Rurban Hope Spots Lancaster



- Finding the hope spots the places that are good for food growing, good for people, good for ecosystems
- Building on Friends of the Earth and Lancaster City Council work and piloting in Lancaster District
- We'll be sharing the results in the Autumn







Four reasons why filling our urban spaces with food growing places is a good idea...



- 1. We need to find ways to do agriculture differently
- 2. Boosting availability of fresh fruit and vegetables is a good idea
- 3. Urban food growing can be good for our health
- 4. Urban food growing can be good for ecosystems (and in turn for us)

...and many more

Join the Rurban Revolution!



- Get in touch with us
- Get involved and support North Lancashire Food Futures and The Plot:
 - https://foodfutures.org.uk/













Thank you

www.lancaster.ac.uk/lec/rurbanrevolution @RurbanRev jess.davies@lancaster.ac.uk