



What to eat in order to harm the environment less?

Fatima Halawi, Gergana Peeva, and Gergana Valkova

Foods That Are Bad for the Environment

Co-funded by the
Erasmus+ Programme
of the European Union



14.5%

of global climate changing gases are
due to meat and dairy production
(more than all forms of transport)

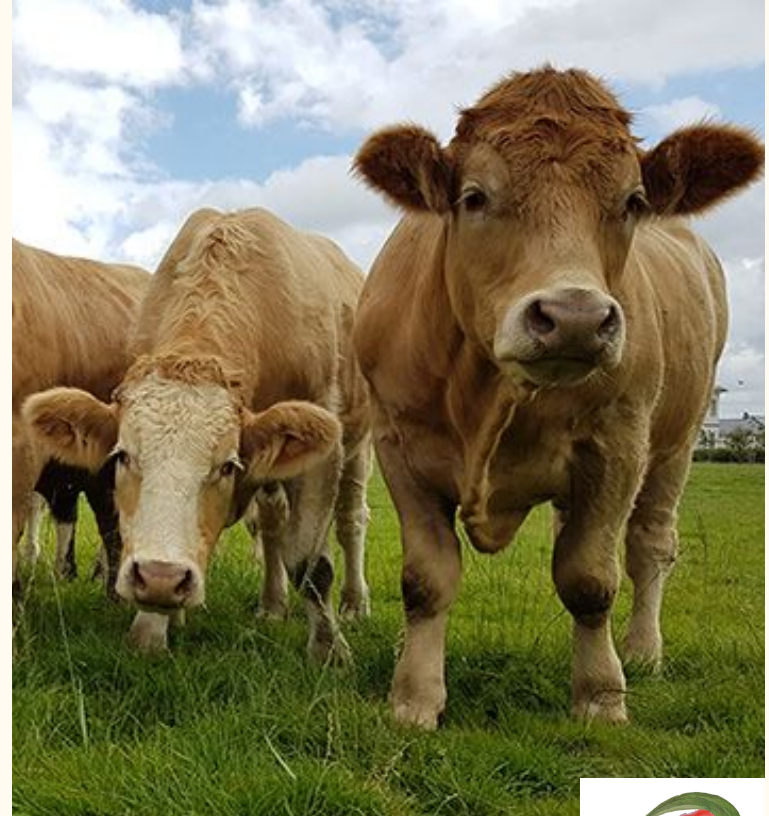
*According to the UN's Food
and Agricultural Organization
(FAO)

Co-funded by the
Erasmus+ Programme
of the European Union



Beef

- Biggest negative impact on Earth
- Cows are ruminants- they can acquire nutrients from plant- based foods by fermenting them first
- Methane is produced from the fermentation: greenhouse gas which is 25 times stronger than CO_2 → highest carbon footprint comes from cows
- A lot of land and many resources are required for cattle
 - 10-14 pounds of feed are needed for 1 pound of beef → results in deforestation



Lamb

- Ruminant animal: constantly generates methane through its digestive process
- Requires significantly more energy-intensive feed and generate more manure
- 50% more greenhouse gas emissions per kilogram than beef
- Provides less edible meat → the worst animal protein for the environment
- Carbon footprint: 55 pounds of CO₂ per pound of meat



Fish

Tuna

- Overfished → tuna population is declining



Salmon

- Most salmon is farmed → chemicals, parasites and food waste might pollute water and become a danger to the environment



Bananas

- Carbon emissions caused by transportation from South America
- High spoilage rates → produce highest wasted mass → highest environmental cost



Co-funded by the
Erasmus+ Programme
of the European Union



Asparagus

- One of the few vegetables with heavy carbon footprint
- 19.6 pounds of CO₂ per pound
- Less to do with cultivation, more to do with the CO₂ produced during transportation
- Flown from one place to another → increasing in the amount of greenhouse gases



Sugar

- Large amounts of water are needed for sugar production
 - 88 gallons of water are required for 5 pounds of sugar
- Fertilizers are needed for its cultivation → freshwater rivers and streams get polluted

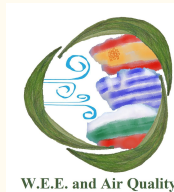
Co-funded by the
Erasmus+ Programme
of the European Union



Palm Oil

- Found in 10 percent of the groceries
- Chips, crackers, candy, margarine, cereals, chocolate, cookies
- Humanity's insatiable demand for palm oil contributes to deforestation
- Clearing forests to grow oil palm trees contributes to global warming
 - Also leads to habitat loss

Co-funded by the
Erasmus+ Programme
of the European Union



White Bread

- White bread is more harmful to the environment than brown bread
- White bread: wheat flour must be refined and go through a series of alteration processes
- Brown bread: whole wheat flour spends less time in production
- Ingredient that requires extensive refining requires more energy and resources → has a greater impact on the planet



Co-funded by the
Erasmus+ Programme
of the European Union



W.E.E. and Air Quality

Chocolate

- *Theobroma cacao* tree is a very complicated plant, which requires 2,400 liters of water to make 100 g of chocolate
- Cacao cultivation puts a lot of strain on natural ecosystems
- Producing chocolate requires a lot of additional processes and products (fermentation, roasting, adding milk and sugar), which increase the environmental impact



Co-funded by the
Erasmus+ Programme
of the European Union



Rice

- Rice requires huge amounts of water to grow properly
 - 3400 liters of water are needed for 1kg of rice)
- Rice fields also release methane, which pollutes the air significantly
 - 100 million tons per year

Co-funded by the
Erasmus+ Programme
of the European Union



Avocado

- Avocado is another vegetable that requires a lot of water for its production
- When not grown in its native climate, it limits a lot of resources in the new place (mainly the usage of water)

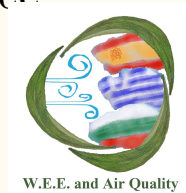
Co-funded by the
Erasmus+ Programme
of the European Union



High-Fructose Corn Syrup

- Corn is a monoculture → depletes soil nutrients; increases erosion; requires additional pesticides and fertilizer
- cereals, baked goods, beverages, sauces, snacks
- Producing high-fructose corn syrup is an energy-intensive practice

Co-funded by the
Erasmus+ Programme
of the European Union



What Can We Do?



Beans and Lentils

Exchange meat for legumes!

- Very low carbon and water footprints
 - Lentils' carbon footprint is 43 times less than that of beef
- Contain a lot of nutrients, fiber and protein
- Lentils clean and fortify soil → it is easier to grow other crops as well

Co-funded by the
Erasmus+ Programme
of the European Union



Sustainable Foods

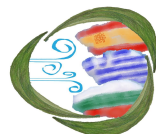
Tomatoes

- Only 1.1 kg of CO₂ per kg consumed
- Easy to grow, so if possible plant some in your backyard



Tofu

- 13 times fewer greenhouse gas emissions than beef
- Produces CO₂ equivalent of less than 1 mile driven per 4 ounces consumed
- Good source of protein and contains all nine essential amino acids



Seasonal Food

Co-funded by the
Erasmus+ Programme
of the European Union



- fresher, tastier and more nutritious
- uses less environmental resources

Spring

- apricots, artichokes, carrots, peas, spinach

Summer

- cucumber, zucchini, cherries, berries, melon

Autumn

- broccoli, eggplant, pumpkin, potatoes

Winter

- kale, clementine, brussels sprout, pomegranate



Thank you!

Gracias!

Благодаря!

Ευχαριστώ!



Bibliography

<https://www.vitacost.com/blog/worst-foods-for-the-environment/>

<https://friendsoftheearth.uk/food>

<https://www.glanbiaconnect.com/farm-advice//detail/article/beef-production-strategy>

<https://www.everydayhealth.com/diet-nutrition/diet/bananas-nutrition-facts-health-benefits-recipes-risks/>

https://www.business-standard.com/article/companies/gd-foods-to-set-up-15-000-tonne-sugar-mill-for-rs-500-crore-in-up-119050800771_1.html

<https://www.bbc.com/news/uk-scotland-48266480>

<https://youmatter.world/en/10-worst-popular-foods/#:~:text=Industrial%20Meat%3A%20The%20Worst%20Carbon%20Footprint&text=Industrial%20meat%20is%20extremely%20harmful,harmful%20meats%20in%20environmental%20terms.>

<https://www.wired.com/story/tuna-fish-school-human-engineers-in-hydraulics/>

<https://www.ladysmithchronicle.com/news/major-b-c-salmon-farm-tests-new-contaminant-system-to-curb-sea-lice-infestations-2/>

<https://www.globalcitizen.org/en/content/environment-food-cooking-sustainability/#:~:text=Local%2C%20Organic%20Vegetables%20and%20Fruits&text=For%20vegetables%20and%20fruits%2C%20though,sources%20and%20clean%20the%20air.>

<https://www.organicauthority.com/organic-food-recipes/how-to-cook-lentils-5-ways-and-7-recipes-for-our-favorite-pulse>

<https://www.cheatsheet.com/culture/love-environment-think-twice-about-eating-these-foods.html/>

<https://www.researchgate.net/publication/225769884> The carbon footprint of bread

<https://www.mindbodygreen.com/0-28163/heres-what-to-eat-and-what-not-to-to-save-the-environment.html>

<https://www.treehugger.com/foods-that-are-bad-for-the-planet-4869286>

https://www.healthline.com/nutrition/20-foods-with-high-fructose-corn-syrup#TOC_TITLE_HDR_14

<https://www.seasonalfoodguide.org/>

<https://www.pbs.org/food/fresh-tastes/whats-in-season-during-the-summer/>

<https://www.foodandwine.com/vegetables/spring-produce>

<https://www.nib.com.au/the-checkup/healthy-living/fruits-vegetables-in-season-autumn>

<https://foodinsight.org/seasonal-produce-winter-fruits-and-vegetables/>

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

