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What to eat in order to harm the environment less?

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Foods That Are Bad for the Environment







14.5%

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

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

W.E.E. and Air Quality



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 $\mathrm{CO}_2 \to \mathrm{highest}$ 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



W.E.E. and Air Quality



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 \rightarrow produce highest wasted mass \rightarrow highest







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 for5 pounds of sugar
- Fertilizers are needed for its cultivation → freshwater rivers and streams get polluted







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







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



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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



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Rice

- Rice requires huge amounts of water to grow properly
 - o 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







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)







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







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

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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



- 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

 $\frac{\text{https://youmatter.world/en/10-worst-popular-foods/\#:}\sim:\text{text}=\text{Industrial}\%20\text{Meat}}{\%3\text{A}\%20\text{The}\%20\text{Worst}\%20\text{Carbon}\%20\text{Footprint}\&\text{text}=\text{Industrial}\%20\text{meat}\%20\text{is}}\\\frac{\%20\text{extremely}\%20\text{harmful},\text{harmful}\%20\text{meats}\%20\text{in}\%20\text{environmental}\%20\text{terms}.}$

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

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

 $\frac{\text{https://www.globalcitizen.org/en/content/environment-food-cooking-sustainability/}{\text{\#:}\sim:text} = \frac{\text{Local}\%2\text{C}\%20\text{Organic}\%20\text{Vegetables}\%20\text{and}\%20\text{Fruits}\&\text{text}}{\text{Err}\%20} \\ \frac{\text{vegetables}\%20\text{and}\%20\text{fruits}\%2\text{C}\%20\text{though,sources}\%20\text{and}\%20\text{clean}\%20\text{the}\%20}{\text{air}}.$

https://www.organicauthority.com/organic-food-recipes/how-to-cook-lentils-5-way s-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

 $\frac{https://www.mindbodygreen.com/0-28163/heres-what-to-eat-and-what-not-to-to-s}{ave-the-environment.html}$

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

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

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