Eating Unprocessed Foods Is the Most Sustainable

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Overview

The environmental impact of processed foods involves many aspects. Processed foods contribute waste from packaging, more gas emissions from transporting the goods to each step of production, and the lack of nutrients that are being replenished into local soils. Many raw materials are also used unnecessarily to package the processed food. (Kroyer 550)

Figure 1: Gas emissions at each level of food production/processing.

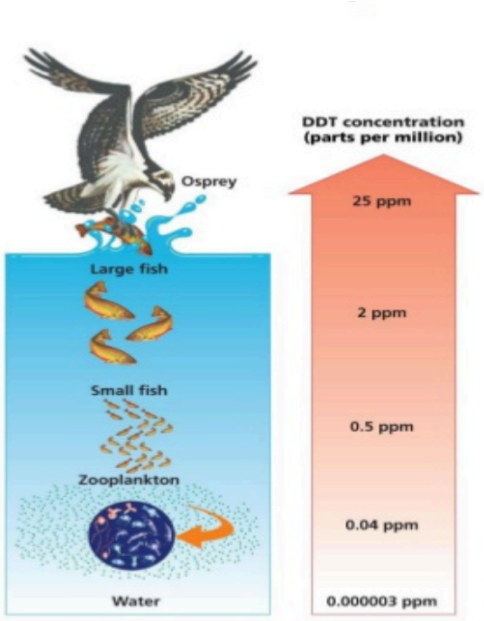

Figure 2: The biomagnification of DDT as it are transferred up a food chain.

Effects on Food Chains

Unprocessed foods maintain more energy and nutrients when processing is not in the equation. Then, when they are composted or put in waste, nutrients are recycled and remain in the local ecosystem. Also, the chemicals that are dumped into the soil due to the containers of processed foods and the chemicals that are in the foods themselves, lead to the presence of DDT concentrations. Biomagnification leads to an increase in chemicals as the trophic levels increase. (Akoto et. al 195)

Soil Biochemistry

Xenobiotics that are found in pesticides, surfactants used in packages, and plastics have a large environmental impact. These chemicals misuse the natural nutrients in the soil. Then, fertilizers simply replenish Nitrogen, Phosphorous, and Potassium. Therefore, the soil biochemistry is ruined which affects the autotrophs, and further down the food chain line. (Denton)

Conclusion

Unprocessed food limits the amount of waste due to less packaging than processed food. It also decreases the amount of Carbon emissions through the transport of processed foods. Processing foods also consumes large amounts of water through preservatives and manufacturing packages, that consuming unprocessed foods saves. The more processed an item of food is, the more energy is used because of the input energy at each level of production. The transport of foods causes nutrients from one area to be transported to another area, within a nation or sometimes internationally. Therefore, the nutrients are not replenished in the soil and the sustainability of a certain production site decreases. Processed foods are inevitable in the modern American diet; there are some ways to lessen the negative environmental impacts from processed foods is to educate people on how to properly recycle. Also, if there are ingredients that the consumer is not familiar with, listed on the packaging, the amount of processing will most likely have severe impacts on the environment.

References:

Akoto O, Oppong-Ooto J, Osei-Fosu P. Carcinogenic and non-carcinogenic risk of organochlorine pesticide residues in processed cereal-based complementary foods for infants and young children in Ghana. Gies A, editor. 2015 [accessed 2017 Oct 29];132:193–199.

Denton C. 2016. How Are Food and the Environment Related? University of Minnesota. [accessed 2017 Oct 30]

Kroyer GT. Impact on Food Product Attributes. 1995 [accessed 2017 Oct 28];28(6):547–552.