



Organic Farming: The Most Sustainable Diet?

What is Organic Farming?

Organic: food that is locally grown, unprocessed, and is not grown with the use of fertilizers and/or pesticides

Non-Organic: food that does not fit any one of the three defined criteria in the definition of organic food

Sustainability: Maintaining resources for future generations by managing the rates of pollution, renewable resource creation, and non-renewable resource use, so their resources are available indefinitely.

Why is Organic Farming Sustainable?

A 2003 study found that organic farming met more thresholds that indicated sustainability than did convention farming². It decreases the use of non-renewable resources which contribute to the increase of greenhouse gas emissions thus reducing the harmful effect of climate change. It increases ecological services and the trophic diversity, or bottom level diversity in the food web, in the soil⁴. This increases the amount of energy produced by primary producers at the bottom of the food web, thus allowing more energy to be passed up through the food web⁴.

Table 9
Field level results of the HPBI for two sites and different FSs at the Alberese farm (Alberese, Grosseto), Tuscany

	IFS ^a (1998)		OFS ^b (1999)		OFS (2000)	
	2	3	2	3	2	3
Wheat HPBI ^c absolute value (score)	1	33	73	71	38	49

Figure 1. This table² shows that organic farming has higher levels of HPBI (which is an indicator of biodiversity) than non-organic farming

Why is Organic Farming not Sustainable?

The average organic diet uses approximately 40% more land than the average conventional diet³. Furthermore,

organic farming is associated with lower link densities, or biodiversity,¹ than non-organic farming.

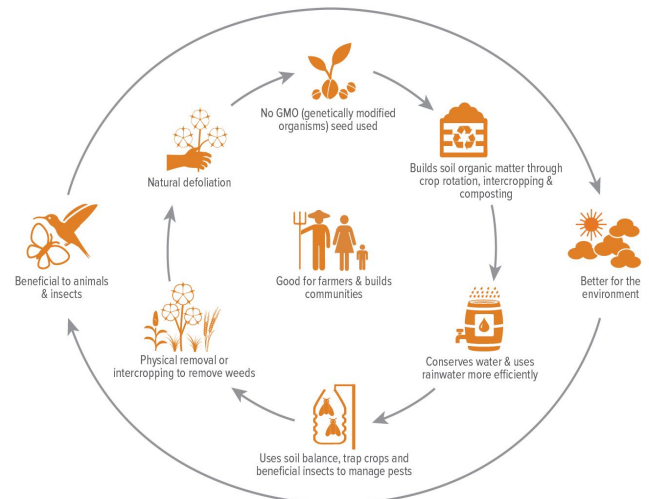


Figure 2. Shows the benefits associated with organic farming and how organic farming positively contributes to environmental sustainability by preserving the nutrients within the soil and reducing the amount of land used for farming

Final Thoughts....

Organic farming may either contribute to environmental sustainability or it may contribute to the degradation of the environment. Research both supports and refutes both claims. Even though an organic diet has many sustainable features, it also has some negative consequences. It uses up more land and has lower link densities which represents a lower biodiversity, than conventional farming. Therefore there is a high probability that an organic diet is not the most sustainable.

¹ Lohaus K, Vidal S, Thies C. Farming practices change food web structures in cereal aphid-parasitoid-hyperparasitoid communities. US National Library of Medicine. 2012 Jun 27 [accessed 2018 Mar 26];249–259. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3538122/>
² Pacini, C. Evaluation of sustainability of organic, integrated and conventional farming systems: a farm and field-scale analysis. Science Direct. 2003 Apr [accessed 2018 Mar 26];273–288. <https://www.sciencedirect.com/science/article/pii/S0167880902000919>
³ Treu, H. Carbon footprints and land use of conventional and organic diets in Germany. Science Direct. 2017 [accessed 2018 Mar 26];161:127–142. <https://www.sciencedirect.com/science/article/pii/S095965261730966>
⁴ What are the environmental benefits of organic agriculture? Organic Agriculture. [accessed 2018 Mar 26]. <http://www.fao.org/organicag/oa-faq/oa-faq6/en/>