

Climate change is feeding our plants junk food

March 23 2021, by Thomas Crow



Credit: CC0 Public Domain

The human-led climate crisis has begun to impact our world in profound ways.

Along with the well-known impacts, such as increased [weather extremes](#) and rising [global temperatures](#), there are secondary effects.

One of these is [food nutrition](#).

Junk food for plants

Environmental carbon dioxide lets [plants](#) photosynthesise more and grow faster.

But there's a catch.

Excess carbon dioxide acts like plant [junk food](#). It makes plants grow faster but [stops them absorbing minerals](#) from the soil.

By 2050, plants will have up to [10% less zinc, 5% less iron and 8% less protein](#).

"That's really significant, because they're key nutrients that we need in our [diet](#). That's going to have a flow-on effect for the people consuming them," says Susan McLeod.

Susan is a nutritionist and lecturer at La Trobe University. She was also one of the organisers for [Taste Tomorrow](#), a group dedicated to understanding our future food supply.

Today, [0.2% of global child deaths under 5](#) are caused by iron deficiency.

[One in nine](#) people worldwide are undernourished, while one in three are overweight. Lower plant nutrition will increase both statistics.

"There are two types of undernutrition. One is the people that are

starving, that are not getting enough food, or they're not getting a diverse range of foods.

"The other one is the people that are consuming foods that are vitamin deficient. They might be eating a lot of food, but it's junk food. It doesn't really contain many nutrients," says Susan.

Australians are the second most [voracious meat eaters](#) in the world, but many are moving to plant-based diets.

Ironically, people choosing plant-based diets to help fight [climate change](#) are [more vulnerable](#) to lower plant nutrition.

So what can we do?

Pills or plant modification

One option is to [genetically modify plants](#) to increase their [nutrient uptake](#) and make them more climate resistant.

Susan says adding genes from nutrient-rich foods, like seaweed, into our wheat and rice could help boost the nutrition.

Australians are divided on whether to do this; [49% of Australians believe GM food is safe to eat](#), but the number is growing.

Changing our diets to be more varied could help too. Australians traditionally eat processed grains, like wheat and white rice, [though this is changing](#).

A varied diet protects against malnutrition, but food variety is a luxury. Low-income Australians currently spend [up to 40% of their income](#) on food, with the cost of healthy foods in Australia [rising faster](#) than the

cost of less-nutritious foods.

We can't tell them to simply buy more. Artificially adding nutrients could help, but it opens up a can of worms.

[Vitamins are poorly regulated](#), and there's a lack of scientific evidence that they can replace nutrients.

"Every time we process a [food](#) or try to edit another nutrient in, it changes the impact to our bodies and our diet. There are flow-on effects too that we need to investigate."

Speaking of a can of worms, Susan thinks insects might be one avenue for adding extra protein and iron into our diet.

Bug burgers

Insects are cheaper and more ethical and have a smaller carbon footprint than other high-nutrient sources. [They could be a great alternative](#) if we could get over the ick factor.

"Insect farms didn't exist in Australia 10 years ago. Now, we can buy cricket meal. There's a whole range of things that you can get that are made with insects."

Susan says no single approach will be enough to deal with changing plant nutrition.

We'll need all of these approaches and more if we want to stay healthy as our climate changes.

This article first appeared on [Particle](#), a science news website based at Scitech, Perth, Australia. Read the [original article](#).

Provided by Particle

Citation: Climate change is feeding our plants junk food (2021, March 23) retrieved 20 September 2024 from <https://phys.org/news/2021-03-climate-junk-food.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.