



Zero Acre Farms are developing a healthier eco-friendly alternative to vegetable oil | Photo source [Pixabay](#)

[Innovation](#) > [Food & Drink](#) > [A replacement for vegetable oil made using microbes](#)

A REPLACEMENT FOR VEGETABLE OIL MADE USING MICROBES

 FOOD & DRINK

The new oil is healthier and more eco-friendly, helping to reduce deforestation

Spotted: There has been much focus on the environmental benefits of reducing red meat consumption. But vegetable oils such as canola and palm oil also have a significant environmental impact. And unlike meat—which is boycotted by [40 per cent](#) of the Indian population—it can be very hard to avoid vegetable oils. For example, the [World Wildlife Fund](#) reports that palm oil is in nearly 50 per cent of processed food products found in supermarkets.

Vegetable oils are common because they are convenient and useful. But the processes that produce them are wasteful, contributing significantly to deforestation in tropical regions. And vegetable oils are often unhealthy – contributing as much as one fifth of the calories we consume.

Now, US startup Zero Acre Farms is developing a promising alternative. The company is harnessing a well-known natural process that is more readily associated with alcohol production: fermentation. This process involves feeding microbes that, in turn, produce a useful by-product. Fermentation has many applications across industries, and microbes are carefully chosen for what they produce. In the case of brewing, the chosen microbe—yeast—produces ethanol. For the Zero Acre Farms process microbes are chosen that produce oil and fat.

The end-product is an oil that can be used in place of vegetable oils. And what is more impressive is that it can be easily subbed into your favourite meal without needing to change the recipe. “It’s a 1:1 replacement, not like using almond flour instead of wheat flour – you just use it instead of whatever product you’re replacing,” explains CEO and co-founder Jeff Nobbs.

Other sustainable food replacements spotted by Springwise include an [egg white substitute made from fungus](#), and [vegan shrimp made from seaweed](#).

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Takeaway:

The most consumed vegetable oil in the world is [palm oil](#). It is popular because it has an extremely high yield. This means that one hectare of land can produce far more palm oil than soy or rapeseed oil – the next two most consumed vegetable oils. The contribution of palm oil to deforestation varies by region. But in Malaysian Borneo it is estimated that expansion oil palm cultivation is responsible for [50 per cent of deforestation](#). Sadly, deforestation from palm oil production is common in areas that provide habitats for the orangutan, pygmy elephant, and Sumatran rhino – all endangered species. Against this backdrop, the Zero Acre oil alternative is promising. However, the company is not getting carried away, and is focusing initially on professed ethical consumers. The oil will have a high price point, rather than being aimed at the mainstream market.