



**Knowledge is power:
DIY editing on Wikipedia**

Accessed over 15 billion times a month, Wikipedia is hugely influential, but 20 years after launch, it still has a ways to go: articles on white men dominate, for example – but it’s an easy fix. Jess Wade, a physicist at Imperial College London, shares her five tips for impactful editing.

1. Play by the rules

Remember that Wikipedia is non-partisan, impartial and aggregates reliable sources to summarise knowledge. There are rules on what and who counts as “notable” and worthy of an entry – and writing about yourself, your family or your boss is a clear conflict of interest.

2. Citations and saves

A Wikipedia page is only as good as its reference list. For every sentence you type, try and add an appropriate citation. Wikipedia’s visual editing interface looks like a Word document, but there’s no autosave – click “publish” often, so you don’t lose your work.

3. Don’t plagiarise

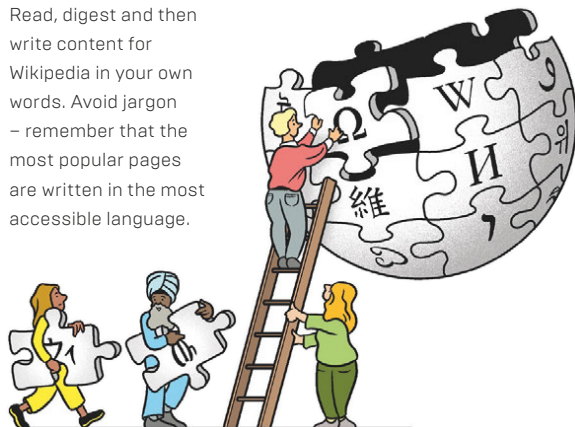
Read, digest and then write content for Wikipedia in your own words. Avoid jargon – remember that the most popular pages are written in the most accessible language.

4. Assume good faith

The Wikipedia editing community is by no means reflective of the population it serves, but they’re not all sitting behind their laptops waiting to delete your work. Join edit-a-thons, listen to experienced editors’ suggestions and use the talk pages to discuss any issues.

5. Be bold

Wikipedia is an open-source, collaborative project whose guidelines and policies evolve every day. Don’t worry about making mistakes – changes can be reverted – and remember that with every biography you update and typo you catch, you make the internet a better place.



Fundamentally, two of the world’s most pressing challenges, climate change and soil degradation, boil down to a simple imbalance: there is too much carbon in the air, and not enough in the ground. Guy Hudson and Tegan Nock are the co-founders of Soil Carbon Co, an Australian agritech startup specialising in what it terms “microbe-mediated carbon sequestration” – a treatment applied to seeds that converts atmospheric carbon into a more stable compound which can then be stored deep in the ground for centuries.

1. FARMERS APPLY THE FUNGAL TREATMENT TO THE SEEDS BEFORE CROP PLANTING

2. AS THE ROOTS SPREAD AND THE PLANT GROWS, THE SYMBIOTIC FUNGUS ALSO FLOURISHES

The star ingredient in the seed treatment is a blend of microbial fungi called “dark septate endophytes”, which live symbiotically in the roots of the host crop. They convert CO₂ absorbed through photosynthesis into fungal melanin compounds, which are less susceptible to breaking down upon contact with water. These compounds are then deposited in soil microaggregate – tiny clumps of soil that provide an oxygen-free environment conducive to long-term carbon storage. “Carbon increases the water-holding capacity of the soil, and also helps capture and retain nutrients, translating into higher yields and better productivity,” says Nock.

Investors are sold: in June 2020, Soil Carbon Co

raised AUD\$10 million (£5.5m) in seed funding in a round led by Horizons Ventures, the private investment arm of Hong Kong tycoon Li Ka-shing.

This capital injection is enabling Soil Carbon Co to go mainstream. Nock and Hudson are currently trialling their seed treatment on crops such as canola, soybean and wheat in Australia and the US, and hope to bring it to market later in 2021. Fortunately, a major selling point of Soil Carbon Co’s technology is that it is low-cost and easy to adopt, unlike many of the regenerative agriculture

methods being practised today, such as no-till farming. Essentially, all farmers have to do is inoculate their crops with the microbes – which will be sold in freeze-dried form – and let nature take its course. What’s more, it is highly scalable. “You already have a workforce of about a billion farmers globally, who spend every day working at the intersection of atmosphere and soil, and who deeply understand that interface,” says Hudson. “You also have ready infrastructure in the form of crops, which are effectively like miniature

fans, constantly sucking atmospheric carbon down into the soil. This all means that we have the capacity to draw down enormous amounts of carbon within a short time-frame.”

It’s certainly an elegant solution – one that could help avert climate catastrophe and sow the seeds for a greener future. “Hopefully, our technology will buy the rest of the world some time to transition away from fossil fuels and to a cleaner economy,” says Hudson. “While it is not going to solve climate change, we want to give humankind a fighting chance.” Delle Chan



25%

Percentage of atmospheric carbon Soil Carbon Co’s technology can potentially capture if it is applied to crops globally

3. THE PLANT ABSORBS ATMOSPHERIC CARBON VIA PHOTOSYNTHESIS

4. DARK SEPTATE ENDOPHYTES CONVERT THE CO₂ INTO FUNGAL MELANIN COMPOUNDS

5. THE FUNGAL COMPOUNDS ARE STORED IN THE OXYGEN-FREE SOIL ENVIRONMENT

THE FUNGAL FARM

Growing crops can also help capture and sequester atmospheric carbon – and all it takes is a few added microbes...