

Bug diets: Good for your health, and the planet!

Can you imagine yourself eating a bug? Not many people can. Yet, this controversial topic is increasingly relevant as rising food waste leads to [food scarcity](#) around the world. As a result, more people are turning to bug diets for nutrition. “[Entomophagy](#)” is the technical word for consuming bugs and insects as food. If we want to make this world [sustainable](#), we need to get over our discomfort and seriously consider insects as food. Overall, entomophagy is promoted based on [three](#) major benefits to health, environment, and economy.



Entomophagy. The fancy word for eating bugs. Image source: [Medical news today](#)

Eating bugs is good for your health

They might not seem appetising, but insects are an [excellent source](#) of proteins, vitamins, fats, and essential minerals. In fact, in terms of nutritional value, bugs tend to be rich in proteins, healthy fats, iron, and calcium, while also being low in

carbohydrates. This makes them [a great option](#) for losing weight! 78 insect species have a caloric content was 293-762 kilocalories per 100 g of dry matter. Also, these are packed with antioxidants, vitamins, and minerals. Furthermore, the [chitin in the exoskeleton](#) of an insect can be extracted as [prebiotic fibre](#).



Crickets in the diet. Image source: [Insect Protein Association of Australia](#)

Which bugs are edible?

A lot of bugs are [perfectly fine](#) for humans to eat. Some edible insect species include beetles, caterpillars, bees, wasps, ants, grasshoppers, locusts, and crickets. As we know, insects have a range of life stages, not all of which are good to eat. Generally, edible insect stages include adults, pupae, eggs, nymphs, and naiad. Furthermore, the life stage of insects best suited for a healthy diet is [large grubs \(larvae\)](#). That said, “best” depends on your individual dietary needs. Crickets, for example, are the best insects if you’re looking for [good fats](#). They are a great source of Omega 3 fatty acids. They also have a high number of antioxidants; three times higher than that of orange juice!

People around the world are increasingly aware of the nutritional value of insects as food. Australia even has its own insect food steering committee, the [Insect Protein Association of Australia](#). They are working out the logistics of using insects as a protein source for people to eat. [They found](#) three types of species recommended for human consumption. These are,

- *Zophobas morio* (super mealworm)
- *Achaeta domestica* (house crickets)
- *Tenebrio molitor* (mealworm beetle).



Comparison of protein and fat content of edible insects around the world. Image source: [EdibleInsects.com](#)

Bug diets are better for the planet

By 2050, Earth will need to feed nearly [9.7 billion people](#). Given the impact of our current [unsustainable agriculture production](#), this presents a serious issue. Added to that, climate change will cause significant crop destruction and crop reduction. This will result in widespread [hunger and food scarcity](#). So, farming insects instead of cattle, [may be our only](#) sustainable solution.

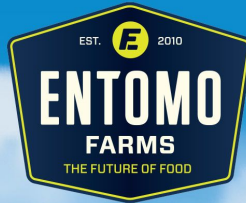
“Choosing an Entomo-based lifestyle once per week can save the Earth 650,000 litres of fresh water a year.”

-Entomofarms-[The future of food](#).

According to [BBC-Future Planet](#), insects are a neglected superfood. Farming insects for consumption is comparatively less environmentally damaging. This is due to a variety of factors. For example, insects are more bio-available (widespread) than other animals. As such, they are easy to cultivate anywhere, without any need for clearing land. In fact, they can grow on by-products of the existing food industry. They also consume far less resources.

5 ways farming bugs is better for the environment than other animals

1. Reduces environmental contamination, adding value to waste.
2. Emits less [greenhouse gases](#)
3. Lower risk for [zoonotic diseases](#) like Covid-19
4. Fewer animal welfare issues
5. More efficient at converting feed to protein ([Current meat production is a very inefficient use of water, land, and food.](#))



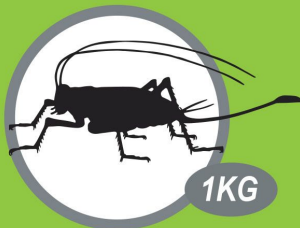
EAT INSECTS

HEALTHY YOU, HEALTHY EARTH

Eating Insects Can
Save Our Planet
From Devastation



22,000 LITRES OF WATER
10,000 GRAMS OF FEED



LESS THAN 1 LITRE OF WATER
1,700 GRAMS OF FEED



2,300 LITRES OF WATER
2,500 GRAMS OF FEED



INSECTS ARE A TRUE SUPERFOOD

Low in CALORIES
Almost 3x MORE PROTEIN
than beef
Low in FAT
More IRON than spinach
More CALCIUM than milk
20 x MORE B12 than beef
All 9 Essential AMINO ACIDS
Perfect OMEGA 3:6 Ratio
High in PREBIOTICS for
Gut Biome Health



ENTOMOFARMS.COM

Insects save the planet. Image source: entomofarms.com

Insect cultivation needs significantly fewer resources such as land, energy, and water. It also comes with a lower carbon footprint due to less emission of greenhouse gases and ammonia than other farming animals. As shown in the

above illustration, to get 1kg of meat, the insects require the least amount of food and water. Larger animals such as cows are one of the most inefficient sources of protein. Just think, you can help save the planet just by what you put on your plate!

Insects are cheaper to farm

It's not just the environment that would benefit from a large-scale shift to farming insects for food. It's cheaper, too! Insects are easy to rear, accessible, have a low production cost, and quick growth rates. Furthermore, according to a report of the Food and Agriculture Organization (FAO) of the United Nations (UN), approximately [2 billion people](#), practise entomophagy. That's about a quarter of the world population; not a bad market share.

Entomophagy also offers some great social benefits. Food security and malnutrition [are common problems](#) in many African countries. But, the [statistics show](#) that there are around 1.4 billion insects for each person on the planet. So, food security wouldn't be a problem, if everyone was eating a buggy diet.



Map of populations willing to eat insects —by country. Image source: [Journal of sensory studies](#)

Breaking the norm for eating bugs

Unfortunately, there is significant cultural and psychological resistance to the idea of eating insects. A study found that Australian consumers have a low willingness to accept insects as a meat substitute ([Sogari et al., 2019](#)). There are several factors at play here, including taste, psychological, health, environment, and marketing. Most people cite the [disgust factor](#) as the major reason they would avoid entomophagy. And of course, a great portion of the rejection could be due to [cultural practices](#). As a result, many people consider insects to be unpalatable. There is also concern about microbial safety and toxicity, which should be assessed via appropriate [policies and food regulations](#).

Progress is being made in this area. Australian industry is currently working on strategies to encourage younger generations to accept bugs in their diet. [CSIRO](#)

identifies the challenges and opportunities to implement this initiative among the public. They developed a roadmap to make insects a staple in the diet. As shown in the map above, countries such as Mexico, Peru, Thailand, [Malaysia](#) have already embraced entomophagy in the diet.

[Beta Hatch](#), a US start-up that creates livestock feed out of mealworms, has already stepped up in choosing an insect diet over other products. Virginia Emery, the CEO of the company said insects are a superfood packed with a whole lot of nutrition in a very small package. Furthermore, UK's first edible insect restaurant "Bug Farm" has initiated serving mealworms and several other options using insect powders. They say people would prefer it, rather than serving the whole insect. Despite the unpopularity of insects in the western diet, this approach seems positive.

Do I have to eat bugs now?

It's probably not reasonable to expect everyone to switch to bug-meat overnight. However, if we want our planet to thrive, we must change our consumption habits. Even small steps can add up to a big impact. So, think about the environmental impact [when choosing your next meal](#). Or share this article to your friends and get people thinking about insects as food.

If eating bugs isn't something you can stomach, you could always look at [vegan diets](#) as part of a sustainable lifestyle. Or look through our [broad collection of articles](#).

Together, we can make the world [THRIVE](#).

This article was produced in conjunction with Binodhya Wijerathne, Shadi Kafi, and Rebecca Deer.