

# Eating insects

ZENO KOLLER – STICKING TO REGULAR FOOD FOR NOW

**Quite interestingly, humans fear creatures that are much smaller than themselves: insects. Most of them cannot do any harm to humans. Despite that, many people reach for the vacuum cleaner as soon as they see a bug running across the floor. In some parts of the world however, insects are not perceived as badly: they are served as food. Food for thought?**

Wandering through the meat section of the local grocery store, you may notice how the shelves in essence just hold rectangular packages containing some mass, coloured in different hues of red and pink. Apart from the odd Guggeli, it's just generic protein—nothing hints at that this food was once part of an animal. A quick read through a cookbook from 50 years ago, featuring ingredients like brain and heart, shows that this has not always been the case. Nowadays though, we eat fish sticks. There's definitely been a trend towards visually neutral food. A reason for this may be that people don't want to associate the cuddly lamb on the field with the cutlet sizzling in the pan.

This article is not about lambs, though: it's about the crickets that are jumping through the grass beneath it. Insects, just like offal, are not part of the typical, contemporary Swiss menu. This is definitely due to cultural reasons, but revulsion (and fear?) also play a role. To a non-westerner, this may seem strange. After all, beetles, caterpillars, and crickets belong to the diet of an estimated two billion people. Considering

the facts, it's only logical to eat insects. Even the UN urges people to eat insects<sup>[1]</sup> to fight world hunger. To be honest, before writing these lines I'd never tried eating insects myself, which is why I've decided to give it a go.



Giving it a go - with a big helping of worms

## Two billion people can't be wrong

Before I go into the details of my meal, let me tell you some particulars about the consumption of insects (also called entomophagy). I also don't want to ramble too much about ethical issues here (ask your local vegetarian/vegan), but



here's a quick breakdown of reasons why eating insects could be a good idea.

As the earth's population grows and climate change looms, conventional agriculture may not be able to cope with ever-increasing demand. This is where insect farming comes in as an alternative that could improve food security.

Many insects are edible and just as healthy as traditional meat. Nutrition-wise, they're probably even better, as they contain plenty of protein, good fats, calcium, and iron. Dried crickets, for example, contain 70% protein, whereas beef has about 30%. Basically, they're the ideal food for athletes.

Entomophagy also makes sense from an ecological perspective: as insects are cold-blooded, they need less energy to grow. To produce the same amount of protein, crickets need 12 times less food than cattle. Also, the little bugs need much less land and don't emit methane. They can even be fed on organic waste. Simply put, they're much more efficient than cows.

It sounds almost too good to be true. If you search the internet for risks involved in eating insects, not much is to be found. The usual dangers of eating any food apply: there exist poisonous insects which you should stay away from. And the edible ones are not for everyone, unfortunately—some people have allergies against them. Just collecting bugs and worms in the wild, like Timon & Pumbaa from the Lion King, is not to be recommended either. Insects roam freely, so they may be tainted by pesti-

cides and other nasty things (this wouldn't apply for mass production, though).

As entomophagy is not that widespread, there are unknowns. Aside from the single UN FAO report mentioned above, most info on the web comes from insect-advocates, so who knows? Meta-hazards may come into play as well: imagine what havoc an escaped industrial-scale grasshopper swarm, feeding away at wheat fields, could cause.

### **Eww, mealworms**

Scenarios for an upcoming Roland Emmerich movie aside, let's face it: the main argument against eating insects in the western world is disgust. But why is that? The FAO report gives some insight into this.

Culture defines the rules of what is edible and what isn't. The historical reason for bug-aversion is that agriculture, which concentrated on domesticating mammals for food and other products, left its mark on western culture. In northern countries, insects are relatively small and not available all year round. They're also perceived badly because they can harm the crops. And because the traditional ways of entomophagy—collecting bugs and eating them—is more on the hunter-gatherer side of things, it's seen as primitive.

Western attitude has also influenced the rest of the world, as Christian missionaries have condemned the practice (despite insect eating explicitly being allowed in the Bible). Still: insects are considered as food in many parts of the world.



Cricket Flour

### Trying it out

After reading up on bug-eating, one big question remained: what does it taste like?

I knew from the start that getting ingredients would not be straightforward. As of 2014, insects are not allowed to be sold as food in Switzerland (in stark contrast to e.g., bear meat). I dismissed the option of buying some animal-feed-grade insects from the pet shop—yuck. As I would later go to the mountains for some hiking, I figured I would just try to catch some crickets there. I didn't get lucky though—the rainy and cold Swiss summer performed to expectation and crickets were nowhere to be found.

As a fallback, I had ordered some assorted roasted insects and 100g of cricket flour online [2]. Of a handful of stores, I found only one that would ship to Switzerland, and the postage was ridiculous. What was delivered about a week later was fine though: inferring from the packaging dates, the products were freshly made. I had yet to figure out what to use the flour for, but



Salad with worms

went ahead and sprinkled some roasted mealworms on a salad. This tastes okay and certainly looks interesting, but it doesn't feed you.

So onto the flour then. Because it's so nutritious, its intended use is to replace only a part of the regular flour in baking. I did just that and adapted an oatmeal cookie recipe (see box). They were just fine.

### Recent developments

As mentioned before, selling insects for consumption is prohibited in Switzerland. There is a legalization movement though, and some politicians are trying to get support for the cause, but the federal council could not be won over yet<sup>[3]</sup>.



In the US, insect-food is beginning to get a little bit more traction. With today's fitness hype, the obvious way of marketing entomophagy is by branding it as sports food. There have already been a number of successful crowd-funding campaigns for making protein bars and other snacks from cricket flour<sup>[4]</sup>.

### Bottom line

Once we reach the point where traditional agriculture gets too expensive to be the only source of food, entomophagy has huge potential. There are of course other viable options as well, for example cultivating algae or growing artificial meat<sup>[5]</sup>.

The remaining question is how to raise westerners' appetite for insects. It should be feasible: shrimps and sushi were not common foods around here, but now they are. And if meat is being visually neutralized, why not use cricket flour?

For this to become a reality, further research needs to be done on the health and farming aspects—for practical reasons as well as for promotion. If this happens, sooner or later the legal framework will follow, clearing the way for investments. 

### Recipe - Oatmeal Cricket Flour Cookies<sup>[6]</sup>

Set the oven to 180°C. Beat with a mixer 120 g butter and 120 g sugar until creamy. Beat in an egg yolk. Mix in 120 g instant oats, 30 g of cricket flour, 60 g of regular flour, half a teaspoon of baking powder, and a generous pinch of salt. Divide into 8–12 pieces, roll into balls and push them flat on a baking tray lined with baking parchment. Bake for 12–15 minutes until lightly coloured. Leave to cool on a wire rack for a few minutes. They remain crisp for about a day, so don't hold yourself back!

Of course you can just use 90 g of plain flour if you don't fancy the crickets :-)

### Links

- [1] Edible insects: future prospects for food and feed security (FAO): <http://bit.ly/1c1U5mm>
- [2] Online store carrying insects: <http://www.nextmilleniumfarms.com>
- [3] Swiss Parliament interpellation: <http://bit.ly/1o2l9lg>
- [4] See Exo (<http://www.exo.co/>) and Chapul (<http://chapul.com/>) for protein bars, Sixfoods (<http://www.sixfoods.com/>) for chips
- [5] The Guardian – Future of food: <http://bit.ly/1pZMEPt>
- [6] Original recipe taken from the book 'eat' by Nigel Slater (ISBN-13: 978-0007526154)

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