

EUROPEAN FOOD TRENDS REPORT

The Big Entanglement Food Between Microchips and Microbiomes

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The Big Entanglement: Food Between Microchips and Microbiomes

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Summary

The crisis no longer lies in the future, it is already here: Depleted soil, multi-resistant germs and hypoxic water bodies show the now undeniable dark side of industrial agriculture. Given that populations are growing in the very regions that are particularly affected by climate change, the question now arises: will there be a return of hunger? Or will we succeed in reversing the trend with the help of modern technologies such as the production of lab-grown meat, digital precision agriculture, vertical farms, genetically modified, more robust crop varieties and fairer, more sustainable farming? Will we manage to throw away less food, develop new plant-based products, eat less meat and simply become more frugal in general? And do this in a manner that not only caters for the latest hipster trends and green fashions, but is truly sustainable?

After all, it is in our own interest to ensure the environment around us can recover. Not just because we depend on its resources, but also because we ourselves are a part of nature – and to a far greater extent than we would have ever assumed: Humans are also ecosystems because the body itself contains many trillions of microbes. They live in the gut, in the mucous membranes, on the skin. Without them we are nothing – or much less, undoubtedly not capable of surviving.

Bacteria and fungi do not just affect our metabolism, but also our health. And what's more: these primordial organisms, which were on the planet long before us, are directly linked to the brain and can thus also affect our moods, our being. This invalidates the divide between humans and nature. We cannot exactly say where humans stop and the microbes start. We are «entangled».

So we are challenged to question our understanding of who we are, which for a long time was based on a divide between mind and body, humans and nature. Developments in modern genetic engineering, synthetic biology and new methods of food production also show that the boundary between biology and technology is becoming increasingly blurred.

On the one hand, research into the microbiome has allowed us to find a powerful key to health and well-being. Which microbes feel at home in our bodies has to do with our contact with the environment, our behaviour and above all of course with our diet. After all, with every meal we eat, we take in a little of the environment.

This however also means that what is outside is reflected inside us. As species diversity diminishes around us, variety in the human microbiome likewise shrinks. Today people in industrialised regions only have half as many species of

microbes as persons who hardly come into contact with Western civilisation. Besides destruction of the environment, there is also internal destruction, which is linked by microbiologists to many diseases of civilisation and today's autoimmune conditions.

In an entangled world, we must practise «joined-up» thinking if we want to simultaneously combat hunger, disease and environmental destruction. How can we offer our growing world population a healthy diet while preserving or even revitalising the ecosystems around and in us? Three scenarios, «Stubborn Optimism», «Radical Regeneration» and «Hard Regulations», describe what the future of our food system might look like.

Disclaimer

To improve the readability of this study, no attempt has been made to use both genders in every case. Either form, be it feminine or masculine, used in this study, shall represent all persons however they identify in terms of gender.

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