



The main purpose is to explore sustainable food production, as cellular agriculture requires significantly less energy, water and produces fewer carbon emissions. | Photo source [VTT](#)

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## RESEARCHERS EXPLORE THE BENEFITS OF LAB-GROWN COFFEE

 FOOD & DRINK

### The team recently produced its very first cup of lab-grown coffee, which smells and tastes like natural coffee

**Spotted:** Finland's VTT research institute has been studying producing lab-grown coffee, using cells harvested from real plants. Recent milestones involved the researchers producing its very first cup of lab-grown coffee, which the researchers reporting its authentic flavour and taste.

"The idea is to use biotechnology rather than conventional farming for the production of food and therefore provide alternative routes which are less dependent on unsustainable practices," explains Dr Heiko Rischer, Head of Plant Biotechnology at VTT.

The technology under investigation relates to a broader interest within food production of creating products using cell cultures rather than actual animals or plants. The main purpose is to explore sustainable food production, as cellular agriculture requires significantly less energy, water and produces fewer carbon emissions.

Using plant cells from real coffee plants, the process involves growing the cells in a nutrient medium. The cells are then transferred to a bioreactor from which the biomass is harvested. After this, the cells are dried and roasted and the coffee can be brewed as normal.

Whilst lab-grown coffee is still in its infancy, there are a variety of groups exploring the market. Compound Foods in the US has recently raised €3.9 million in seed funding to develop coffee without the beans. At Springwise, we have seen this trend in startups like [MeaTech 3D](#), the world's only publicly traded cultured meat company. The next steps for all players in the industry involve undergoing regulatory approval.

Written By: Katrina Lane

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Website: [vttresearch.com](http://vttresearch.com)

Contact: [vttresearch.com/contact](http://vttresearch.com/contact)

### **Takeaway:**

Around 10 billion kilograms of coffee are produced each year in the world. Meeting coffee demands has already seen the deforestation of vast areas, as coffee plants require a lot of direct sunlight. Research has also found coffee to be vulnerable to climate change. That means that a lot of the land currently used to produce coffee will become less suitable in a warmer world. Given these events, lab-grown coffee seems like a smart move.