

Save the world with peas



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Chicken made from pea protein is contributing to a more sustainable world: Lukas Böni and his co-founders of the company Planted combine culinary pleasure and cutting-edge food technology.

“Saving the world – one bite at a time.” As the website of ETH spin-off Planted shows, Lukas Böni and his like-minded colleagues are not short of ambition. “After finishing my doctorate at ETH, I was determined to set up something that has a positive impact on the world,” Böni explains. Given his background in food science, he naturally felt that he would be able to make the biggest impact in the food sector. Planted, the company co-founded by Böni, now offers plant-based chicken made from pea protein.

Seed funding jump-starts success

Böni developed the idea for Planted together with his cousin, Pascal Bieri. In 2017, the HSG graduate was working in the US, where there was already a fairly substantial market for meat substitutes. He and Böni immediately saw the potential. They formulated an idea for the manufacture of plant-based meat and presented it to ETH Professor Erich Windhab. Böni had completed a doctorate on the “fascinating secretion of the hagfish” in Windhab’s

Laboratory of Food Process Engineering, and was therefore familiar with soft, fibrous, protein-rich materials that resemble meat. Windhab supported the plan and recommended his doctoral student Eric Stirnemann. Shortly afterwards, Christoph Jenny joined the team, completing Planted's founding line-up of four. Böni's spin-off also received a vital jump-start: thanks to a Pioneer Fellowship financed by ETH and private donors, he and his team had CHF 150,000 at their disposal, plus access to ETH Zurich's laboratories, equipment and expertise. "It was crucial in helping us make that huge leap from idea to product." Böni is convinced that Planted would not have reached market as quickly without the Pioneer Fellowship.

Changing consumer attitudes boost market growth

The relevance of Planted can be seen in the latest statistics: meat production is responsible for about 18 percent of global greenhouse gases; other negative effects include over-fertilisation and antibiotic resistance. Not at Planted. "Our product helps conserve natural resources and consists of only four ingredients: pea protein, pea fibre, sunflower oil and water," Böni explains. The manufacturing process is similar to making pasta: the protein, fibre and oil are kneaded to create a dough and then fed through an extruder under pressure and heat. This creates the chicken-like consistency. The success relies on creating a product that mimics the original as closely as possible. "Our target group is made up of flexitarians – people who like meat but are looking for sustainable and animal-friendly alternatives," the 30-year-old entrepreneur explains.

Böni is convinced that the food sector is currently experiencing a strong shift towards more ecological and responsible products. Market forecasts suggest he is right. According to Barclays' Industry Report, the plant-based meat business could expand to USD 140 billion by 2029 and make up ten percent of the global meat market. But how will a small ETH spin-off stand out from the crowd? "Our close ties with ETH allow us to keep pace with ongoing technological advances and use them to improve our plant-based meat," explains Böni.

Relocating – but not too far from ETH

The strategy seems to be paying off. For its seed financing round in October 2019, Planted raised seven million Swiss francs. 28 Swiss restaurants are already serving pea chicken, and the new online shop has been taking orders every day. The aim of the now eight-strong team is to move into retail at the beginning of 2020. To produce the necessary quantities, Planted needs more space. The company is currently assessing suitable locations that are within easy reach of Zurich by public transport. "We are looking to retain the proximity to ETH and to Zurich, which is an attractive place to live," says Böni. There's a good chance that the move will happen very soon.

Planted is slowly spreading its wings; the motivation is still as strong as it was at the outset. Perhaps even stronger. After becoming a father last year, Böni is taking his mission even more seriously: "I don't just want to create something for myself: I want this to be for my daughter and her generation too," he explains without hesitation. Ambition: saving the world – one bite at a time.

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The Pioneer Fellowship was crucial in helping us make that huge leap from idea to product.

Lukas Böni, co-founder of Planted

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