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The business of sustainability

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Price points, fundraising, and scaling are the unavoidable and necessary parts that turn sustainability dreams into reality. It helps to have investors that believe in both the mission and business

Since its inception in 2019, TurtleTree Labs has garnered plenty of attention for its ambition to produce milk from cells. The Singaporean startup has since become known as the company producing human breast milk in a lab thanks to considerable media coverage, ranging from the [BBC](#) to the [MIT Technology Review](#).

For TurtleTree CEO and co-founder **Lin Fengru** (SMU SIS 2011), the decision to focus on human milk came shortly after starting the company with Max Rye, TurtleTree's Chief Strategist.

"At first it was all about the milk and 'I want to change the world' but price point was not something that came to me right off the bat," Lin notes. "It was something we realised only after talking to the big infant milk companies. One of them even invited us to their dairy plant, which costs upwards of billions of dollars.

"They said, 'Is this something you want to build to compete against us?' We quickly realised it's not something that we should be looking at, and that we should be looking at products the market needs and wants, which are these human milk components."

RAISING CAPITAL, BUILDING WITH TALENT

Lin recounted that part of her entrepreneurial journey at a recent webinar panel discussion titled "Changemakers Conversations: Urban Sustainability", organised by the SMU Institute of Innovation and Entrepreneurship (IIE) as part of the 10th Lee Kuan Yew Global Business Plan Competition (LKYGBPC). While fluid milk (definition [here](#)) remains TurtleTree's ultimate goal, Lin was clear-eyed that "at \$2 a gallon it's not something we can reach" at the present moment.

TurtleTree's strategy will be based largely on licensing and royalties, working with infant milk brands to make formula milk more like human milk, and with dairy processors such as Fonterra to process milk. While fluid milk is not yet something TurtleTree is able to produce at a competitive price, the promise of meeting demand for milk without the unsavoury conditions often associated with big dairy farms is something that piques investors' interest. In December 2020 TurtleTree raised US\$6.2 million in pre-series A funding, just six months after securing US\$3.2 million in a seed round.

"When you're raising money to start a company, one of the rules is: 'Always raise more than you think you're going to need' because you're going to need it," says **Nick Halla**, SVP International at Impossible Foods. "It gives you the flexibility to build the company the right way versus having to pinch pennies."

As the first employee at Impossible Foods, Halla had unique firsthand insight into how founder Pat Brown built the company by hiring scientists with the requisite skills to turn his vision into what has become reality.

"For the first three and half years nobody knew who we were, there was no public recruitment, it was all through networks," Halla recalls. "Pat Brown is one of the top scientists in the world so when we were hiring to build a science team, it was the chance to work on a science project that was a multimillion dollar industry and insanely impactful."

“It’s almost like we’re hiring out of grad school to do an extended post-doc, work on a problem that can have a bigger impact than anything else in the world with one of the top scientists in the world; it’s a pretty good pitch! We got most of the scientists that we offered a job to.

“After that it was definitely telling the story. For us, it’s a big vision. Our goal is to grow products that can outperform anything animals can do.”

PITCHING AND SCALING

It is well-known in sustainability circles that [beef is the least efficient meat, both caloric- and protein-wise, at three percent](#). Essentially, the amount of calories and protein (let’s say it is 100 calories and 100 grams of protein) in the feed for cattle produces a return in beef that is only three percent that (three calories and three grams of protein). Poultry is three times more efficient for calories, and six times when it comes to protein.

The math, Halla explains, is a key way to pitch Impossible Foods to investors.

“There’s every reason to believe we can be 10, 20 times more efficient than a cow ever could be,” asserts Halla. “All we have to do then is use that efficiency and say, ‘Can we produce products at less costs than an animal could?’ Every model shows you can.

“The other part is scaling. In food, as you are starting, it’s clear that the system is built for animal nutrition and animal agriculture. You are going to start at higher costs. As you start at a small scale building your brand, it’s really important for businesses to – from the start if you can – build a profitable business model where every pound of product you produce, you make money, your distributors make money, your customers make money.

“It might be a higher price initially in the market, but as you scale the system you have a roadmap on how to pull the price down to something that can compete in the mass market. Food is such a diverse marketplace that there is a lot of room to start building brands. Even when you’re at a small scale where your costs are going to be higher, it is important that you have a relatively quick path to a profitable route to better economics.”

But what if the business fails to scale?

“In my experience, you need investors who believe as much in your mission as they do in the business,” Halla shares. “They’re the investors that are going to be behind you through a lot of the bumps that you are going to hit.”

DOING GOOD, DOING WELL, HAVING YOUR CAKE AND EATING IT

Panel moderator **Paul Santos**, Managing Director of venture capital firm Wavemaker Partners, has made about 100 investments. He estimates that “65 to 70 percent of our existing portfolio, hand to heart, are trying to achieve UNDP sustainability development goals”.

Is Wavemaker the kind of investor that sustainability entrepreneurs should be seeking out? And if there are venture capitalists who believe strongly about doing good to do well, should they be less stringent in their selection process in the name of making a difference to long-term sustainability?

“When investors ask us, ‘What are you looking for?’ the honest answer is a compelling founding team tackling a really big problem, and doing it ten times better than whatever the existing solution is,” he

offers. “If you can do that, you have the potential to create a really big business and generate the kinds of returns that investors in our funds are looking for.

“When we look at sustainability-related investment, the bar doesn’t go lower. On one side, you might say it makes it harder to find suitable companies to invest in. But as you heard from all of our panellists, they actually make business sense. I would rather work on problems like these than finding some brainless entertainment companies – there’s enough people doing that.”

He concludes: “So, you don’t get a break or discount from a VC because you’re doing good. You keep the bar high. But because of the problems you are solving, and the values you are creating, the belief is you will get rewarded. That’s why for us it’s a having-our-cake-and-eating-it kind of bet.

“We get a return and we do good. Why wouldn’t you want to do that?”

If you are interested to watch the full Changemakers Conversations: Urban Sustainability, visit: <https://www.smu.edu.sg/lky/changemakers-conversations-urban-sustainability>

The final 2 Changemakers Conversations will be held on 18 March 2021 on the topics of Digital Transformation and Growth in Asia respectively. For more information, please visit <https://www.smu.edu.sg/lky/public-events>

Organised by SMU Institute of Innovation and Entrepreneurship, the 10th LKYGBPC is Asia’s leading university startup competition with the finals week, BLAZE happening on 18 - 19 March 2021 in Singapore. Join over 1,000 of the world’s brightest minds in innovation to learn, collaborate and connect.

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