

Sun Bear Bioworks Alternative Palm Oil Innovation Fair Abstract

We are happy to attend in person

We are happy to appear on the Sustainable Palm Oil website

We are happy to pitch our innovation during the SPOD breakout session

Introduction

Sun Bear Bioworks Ltd are reimagining farming through the use of precision fermentation. We aim to make everyday essentials more healthy and sustainable and our focus is an alternative palm oil.

What is the problem you are trying to solve?

With bans on additional land use limiting physical expansion of oil palm plantations and the well known issues of deforestation and its repercussions affecting the environment and a market predicted to grow 40% by 2030, we see precision fermentation of oil as a great alternative for additional production.

What is your proposed solution?

Using yeast, which we feed with crop residue in bioreactors, we will be able to produce an oil with a very similar chemical profile to palm oil, allowing for usage by the cosmetics and food industry.

What would make your innovation successful and how would you measure this?

We have 3 key areas of focus 1. Increasing the yield of our yeast strain, 2. Producing oil extracellularly (outside of the yeast cells) and 3. Transitioning away from sugar as a feedstock to crop residue. We are working on the yield improvement and extracellular production in the time period up to December 2022 and will be starting our crop residue research in early 2023. Partnerships with large cosmetics and food companies will help make us successful. Measuring will be focused on yield percentages and commercial partnerships and customer trials.

Why should this innovation receive a place in the innovation fair at the Sustainable Palm Oil Dialogue?

The legal barriers to further growth are clear, the continued introduction of more legislative requirements for product reporting on ingredients and the supply chain complexity is well known and the start of consumers and retailers turning away from this great product are proven. Our innovation offers a sustainable solution to all of these issues and many producers, manufacturers and retailers can benefit from our alternative palm oil, which ultimately helps us all.