



NO
Palm
Ingredients

The alt-fats company
that upcycles sidestreams
and brews the most
sustainable
palm oil alternative

Jeroen Hugenholtz

IFFI Start-up Event, September 14th 2022



Problem

Rising demand for palm oil
has a large impact on our
environment

The Market are increasingly looking for alternatives



Increasing prices



Significant long-term price increase of palm oil expected

Price volatility



Palm oil prices (CPO) are volatile and expose Fast Moving Consumer Good Companies to considerable risks

Certainty of supply



Global events have demonstrated the fragility of our food system, resulting in uncertain supply of vegetable oils

CSR Pressure



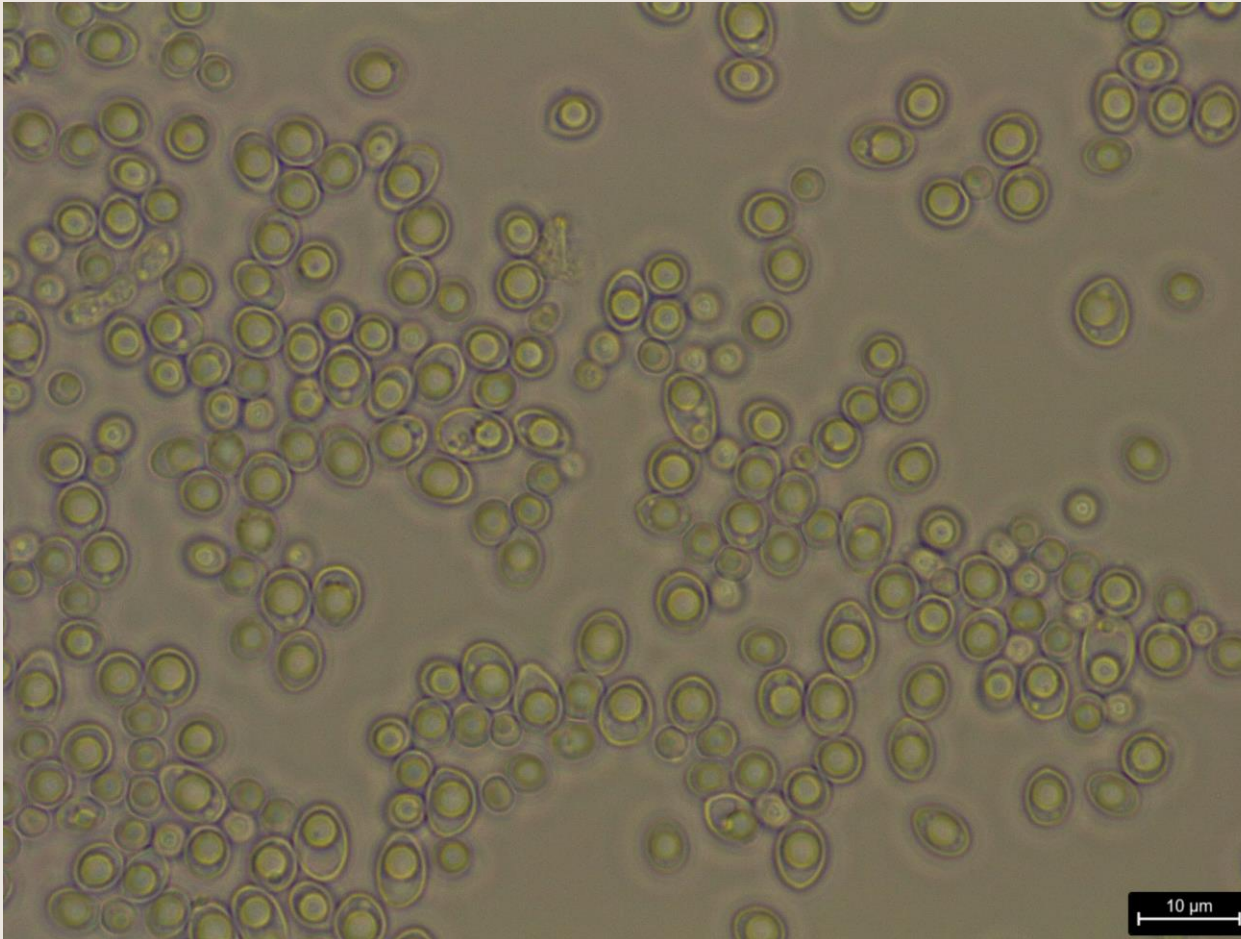
FMCGs increasingly look for Corporate Social Responsibility (CSR) opportunities across the supply chain



Solution

Microbial oils produced by fermenting sidestreams provide a sustainable alternative to palm oil

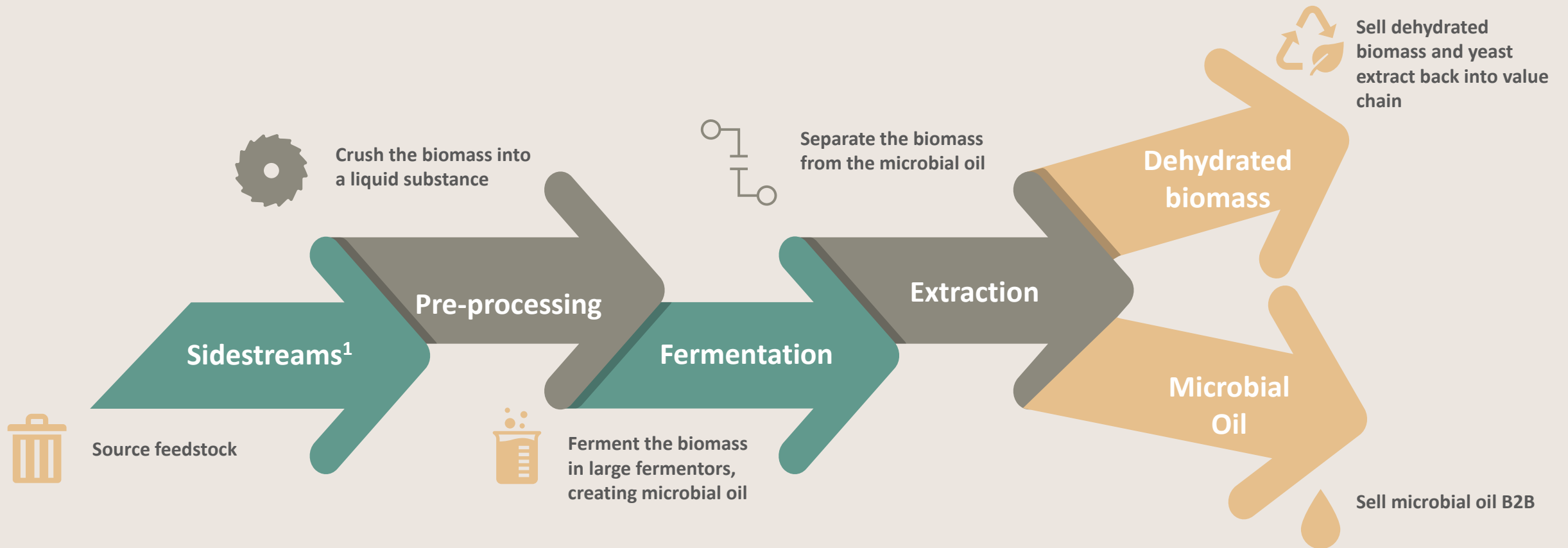
Microbial Oil: Yeast filled with oil globules



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Circularity and Fermentation are at the core of our technology

Simplified production process



Our technology works with many sidestreams, as long as it contains sugars, organic acids or alcohols

Example feedstocks



Potato
Peels



Rejected
Vegetables



Brewer's
Spent grain



Vegetable
Tops



Our microbial oil is also widely applicable across industries and it is tunable to our customers' needs



Our solution is circular and sustainable

90%

of feedstock is brought
back into value chain

Reduces carbon emissions

Reduces land use

Protects habitat of endangered species

Prevents chemicals use in refining

Does not require global transport

Other alternatives don't bring the same advantages

Competitors



Not circular

We only use renewable feedstocks

Algae oils



Less functional

Low productivity and only focused on health, not functionality

Vegetable oils

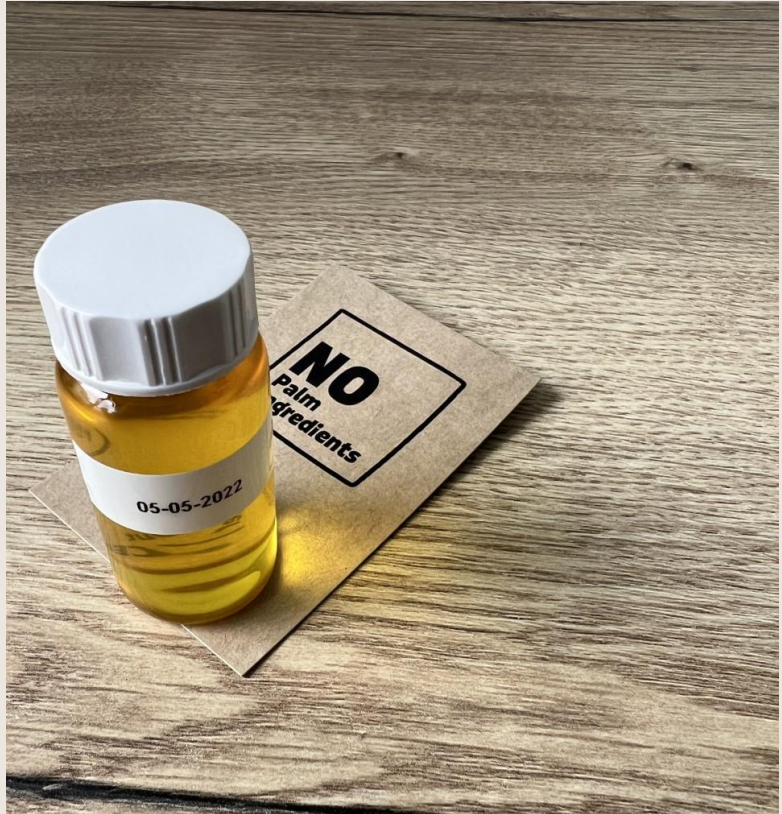


Fixed

Inability to change composition of the oil alternative

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Today we already run 100L+ fermentations and are ready to share first samples



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Examples of tunable oils and fats



Microbial Fat



Microbial Oil

We plan to achieve industrial scale by 2024...

€ 1M First investment

Raised with angels and VCs

Scale production process

Jan '22 – Jan '23
From 100L – 10.000L

Build and Run Pilot Plant

July '23 commence production
10 kT microbial oil

Build Commercial Plants

July '24 Start construction and commence production
70 kT + microbial oil

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... and scale rapidly with two business models

Model 1: Manufacturer Model

- Decentralised production locations on-site or next door to suppliers of sidestreams
- Use sidestreams from strategic suppliers as feedstock for microbial oil
- Have suppliers co-invest in NoPalm Ingredients or specific production facility
- Capex owned by NoPalm Ingredients, requires raising sizeable funding rounds or debt financing

Model 2: Licensing Model

- Co-locate on-site with customers
- Use sidestreams from customer's production process as feedstock for microbial oil
- Customer own Capex, NoPalm Ingredients provides technology and knowhow through licensing model

We have the right team: our founders have complementary skillsets...

Founding team



Jeroen Hugenholtz
CTO, Co-Founder

Biology and biochemistry expert

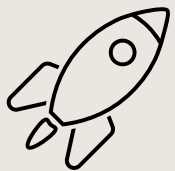
PhD in microbiology
PostDoc Bioenergetics



Lars Langhout
CEO, Co-Founder

Growth Strategist

Msc International Business
& Management
MBA Columbia Business
School



Team of two highly ambitious and driven co-founders that are poised to make an impact



Proven hands-on experience in product development for large FMCGs



Credible reputation in the field of molecular microbiology and fermentation as professor



Background at a top tier strategy consultancy and MBA



Extensive experience in growth strategies in the food and beverage industry



Complementary skillset of technical and business know-how

Reasoning behind our start-up

1. We are following the same/similar development as start-ups in Protein Transition
2. We believe that development within a start-up is faster than in a corporate environment
3. We can focus on our own vision with respect to development of sustainable products
4. We will be developing our own Pilot / Demonstration Plant in 2023, followed by the first commercial factory by Q4 2024/Q1/2025



Current status of NoPalm Ingredients



1. We are in our 1st year of existence and showing feasibility and scalability of our process
2. With proof of feasibility and scalability in hand, we will go for a next fund-raising starting November 2022, to build our own pilot-plant / demonstration plant
3. We experience hurdles with respect to our limited knowledge on (downstream) processing and application of our oil and have reached out to experts in these fields (oil refinery and food application) working for our potential clients

What do we need to keep developing quickly?



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1. We need to choose the right industrial partners – feedstock providers and oil end-users – to support us in rapid development of our products
 2. We need to choose the right investors that support our vision and have relevant expertise to share with us
 3. We need to receive EFSA- and FDA approval to become commercial in the food area
 4. Legislation needs to be adjusted to recycle waste streams into food ingredients
 5. We need to find (a lot of) good talent

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