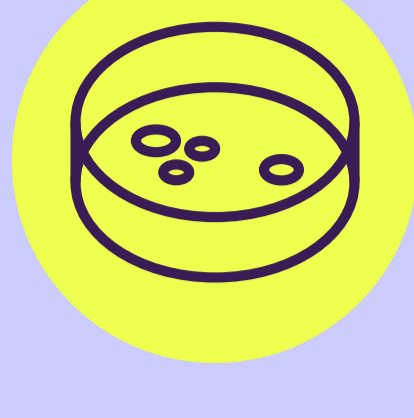
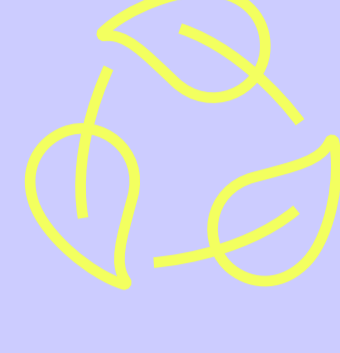
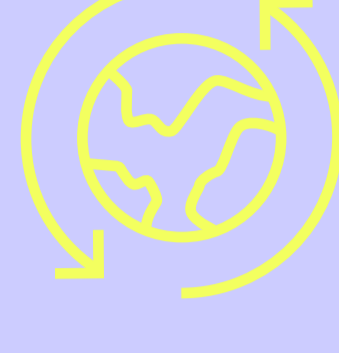


Funghi as Alternative Proteins



Why use fungi as an alternative protein source?



Nutritious & sustainable

Fungi are rich in essential amino acids, fibre, and healthy compounds, making them a **great alternative to animal protein**.

Eco-friendly

Growing fungi uses far less land, water, and energy than livestock farming, helping to **protect the planet while feeding a growing population**.

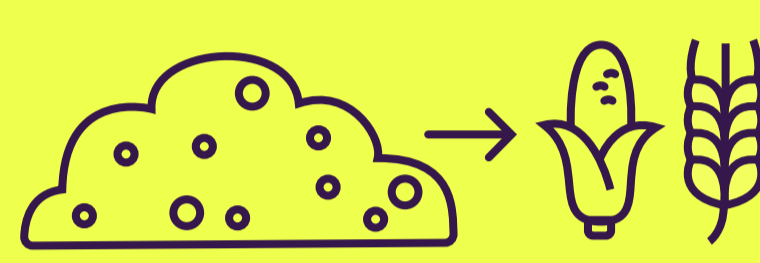


Methodology



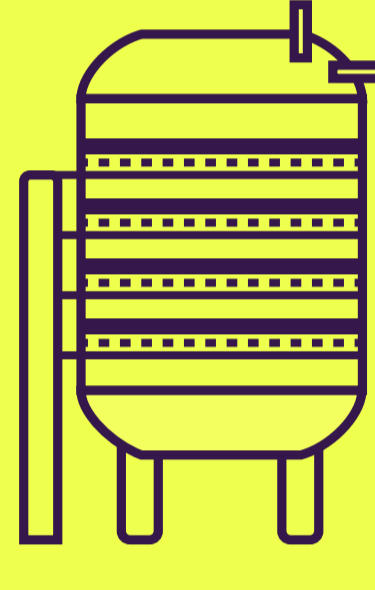
1 Screening

Screening for potential fungal strains for protein production applicable in Solid State Fermentation.



2 Substrate selection

Harvesting and food processing by-products.



3 Fermentation optimisation



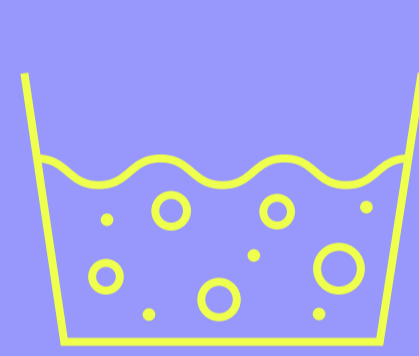
How are fungi proteins produced?

(Example: Growing *Aspergillus oryzae* on lupin pomace)



1 Washing

Washing the cereals as they can be dirty from the fields.



2 Soaking

Until achieving the required substrate humidity.



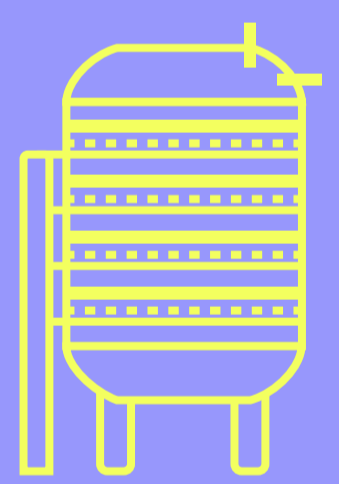
3 Steaming

Used to kill unwanted microorganism that grew in the previous processes.



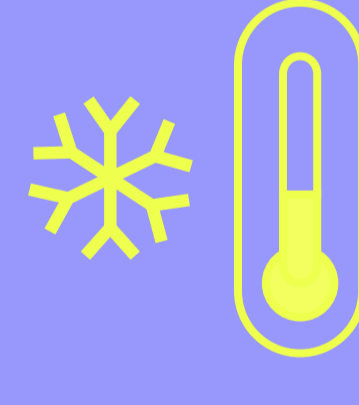
4 Inoculation

Inoculation of the substrate with the starter culture.



5 Fermentation

Controlling process parameters (not external) during the defined fungi growth phase.



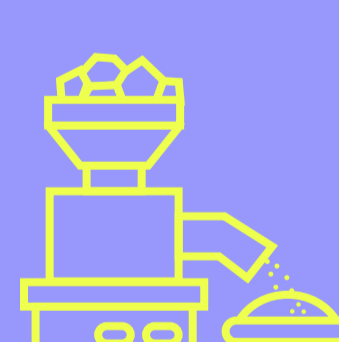
6 Cooling

Because the fermentation process produce heat.



7 Drying

Take out the excess moisture and prolong self life.



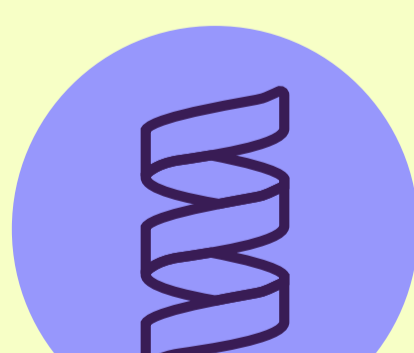
8 Milling

Milling & agglomeration for direct applicability in food & feed.

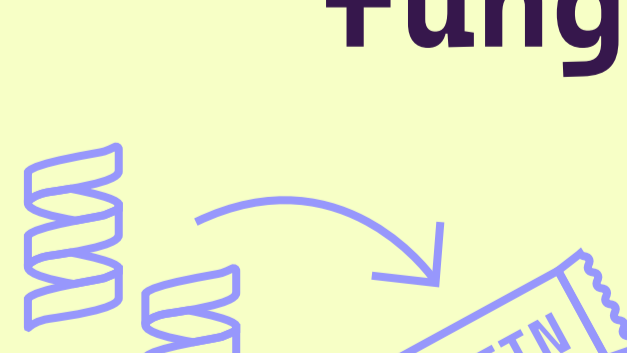


Quality control

Routine checks are needed to monitor microbial load during production to ensure safety and quality.



The benefits of fungi protein powder



Used directly in foods & feeds:

The powder can be **added directly to food or animal feed** formulations.



Health benefits:

Reduction of antinutrients through the fermentation process.

Rich in digestes that support digestion and overall health for humans and animals.



Nutrient-rich:

Besides protein, **other valuable nutrients** support nutrition for both humans and animals.