



CENTRE OF
**BIOLOGICAL
ENGINEERING**

*Linking life and technology
to shape the future*

Alimentação do Futuro

O papel da inovação e tecnologia

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University of Minho

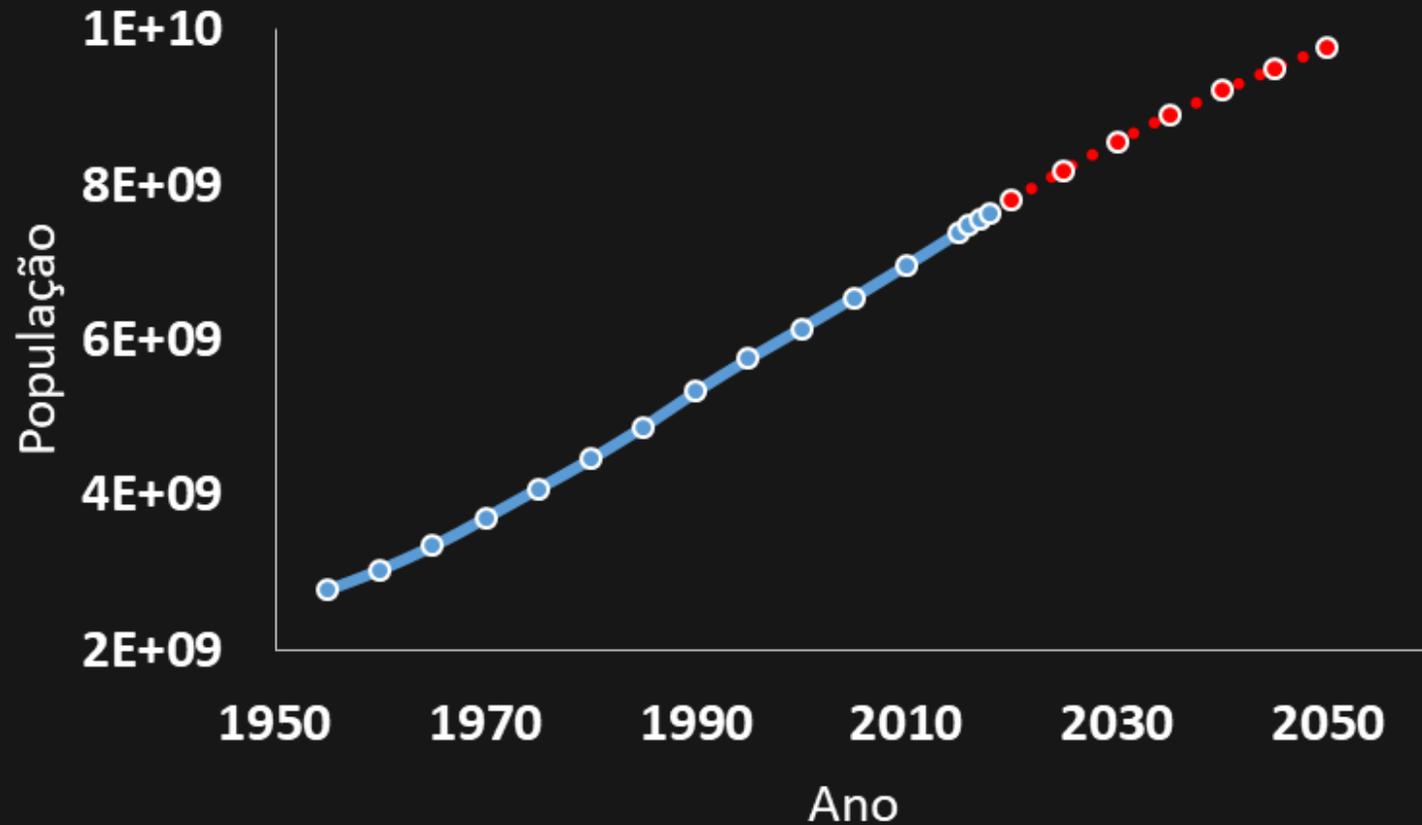


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CRESCIMENTO POPULACIONAL



10.0 Biliões em 2055 (ONU)

8.0 Biliões em 2023

7.7 Biliões em 2018

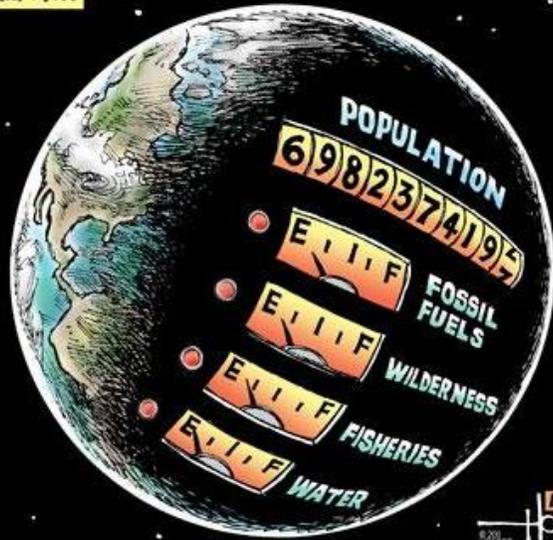


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CRISE DA CADEIA ALIMENTAR



RUNNING ON EMPTY...

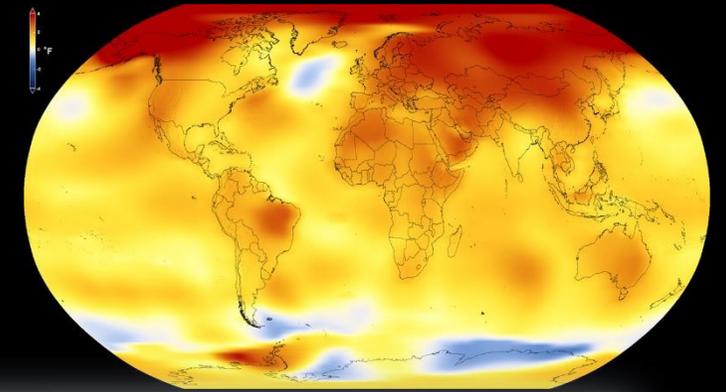


Donald J. Trump
@realDonaldTrump

Follow

Brutal and Extended Cold Blast could shatter ALL RECORDS - Whatever happened to Global Warming?

7:23 PM - 21 Nov 2018



World will run out of food by 2050 thanks to population boom

THE population of Earth could be too big to feed itself by 2050, according to scientists.

By SEAN MARTIN
PUBLISHED: 10:01, Sun, May 14, 2017

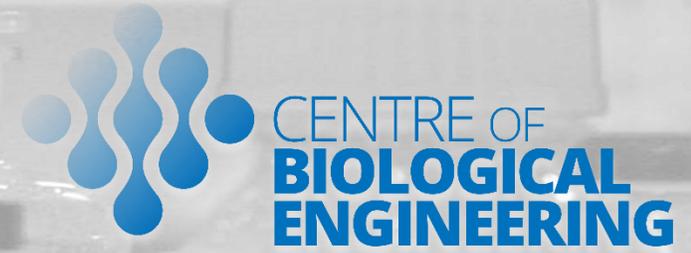
SHARE f TWEET in G+ p





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QUESTÃO

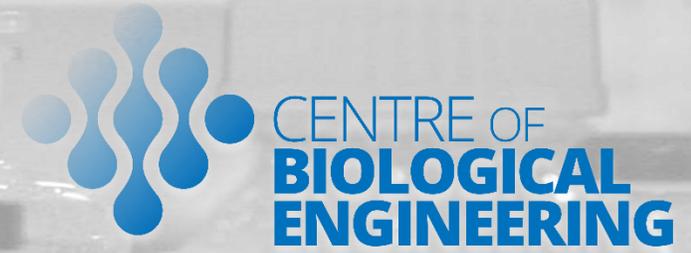


Qual o futuro da alimentação ?



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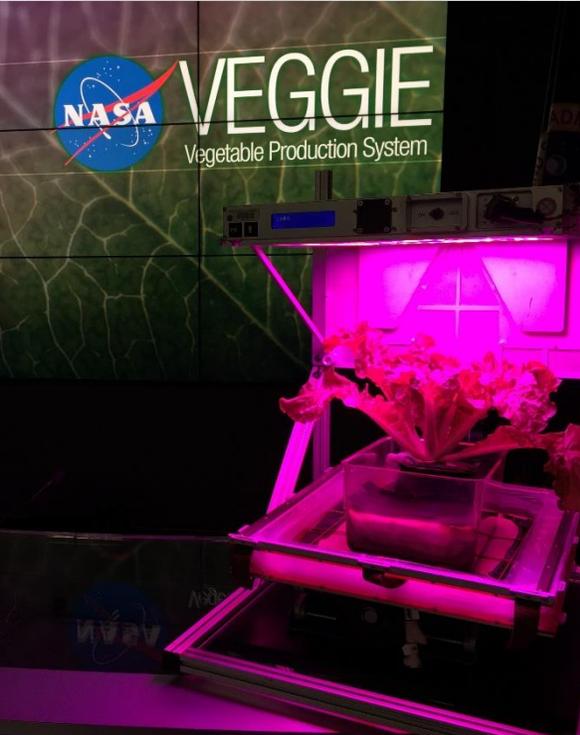
Alimentos do “Espaço”





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ISS Research @ISS_Research · 5h
After trying the lettuce plain, @astro_kjell and @StationCDRKelly added oli & vinegar! #NASAVEGGIE
325 650





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Microalgas

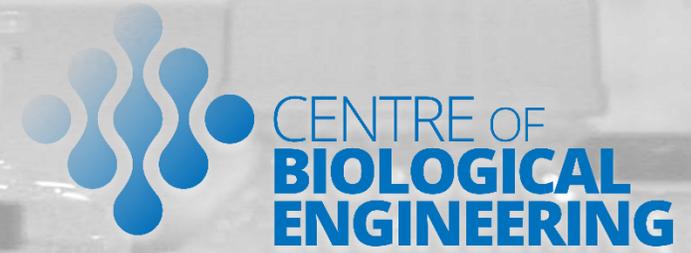
1 – 100 μm

A microscopic image of various green microalgae. The central focus is a large, dense cluster of spherical cells. Other smaller clusters and individual cells are scattered throughout the field of view. A white double-headed arrow is positioned to the right of the central cluster, indicating a scale of 1 to 100 micrometers.



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Israel (deserto de Arava)



Austrália



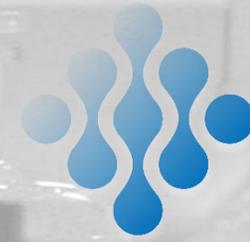
Portugal (Leiria, AlgaFarm)





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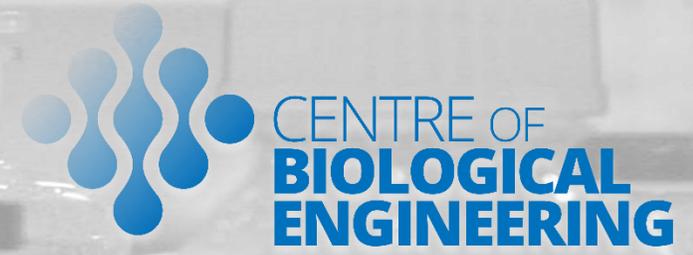
PROTEÍNAS EMERGENTES





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Leguminosas



Brassica



Fungos



Soro do Leite



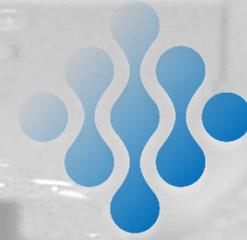
eat more
BUGS





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BIOENGENHARIA E BIOTECNOLOGIA ALIMENTAR



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#Transferência
De
Conhecimento

#Qualidade

#Sustentabilidade

#Segurança

CEB

#Inovação

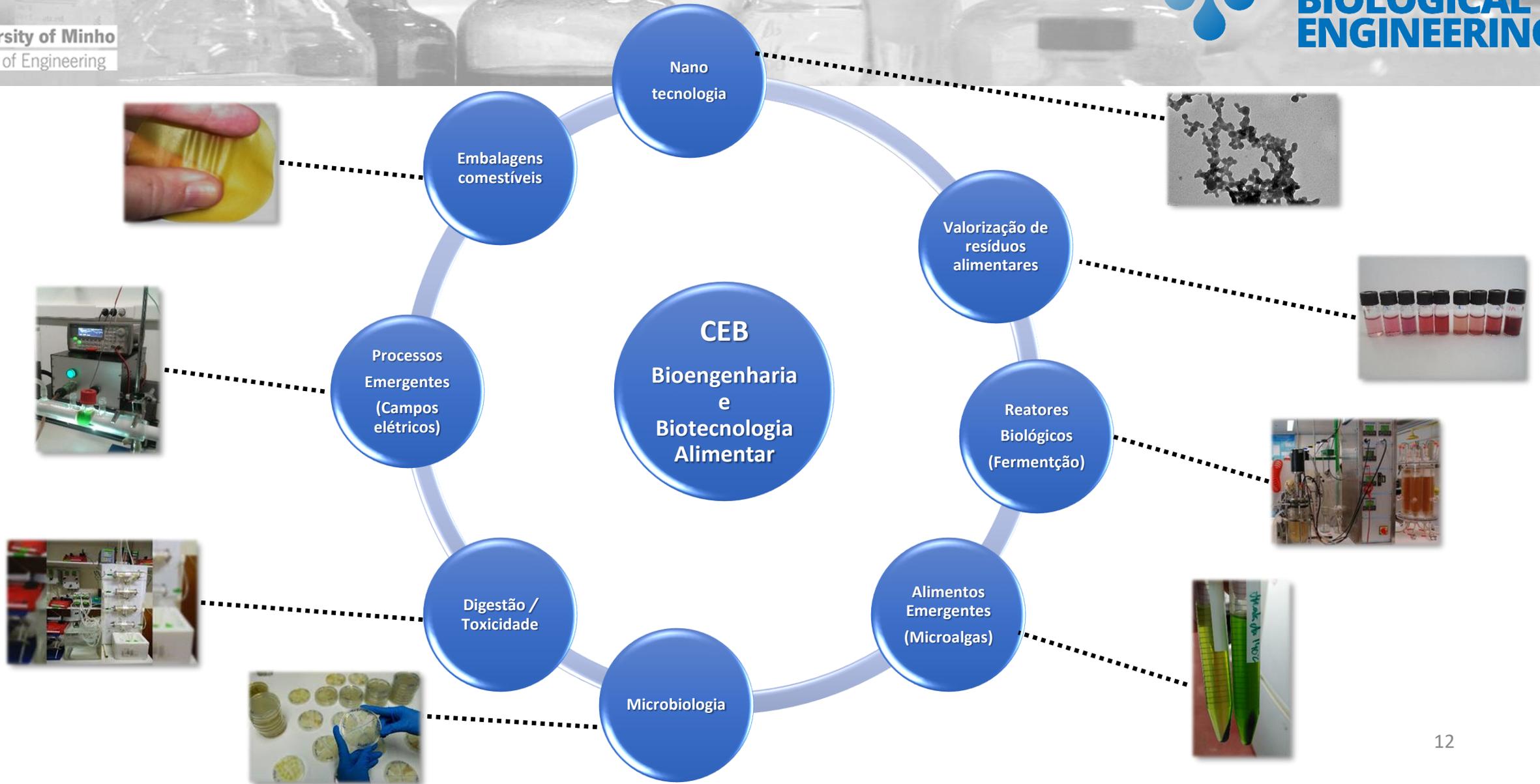
#Valorização

#Novas Tecnologias

&
Desenvolvimento



LINHAS DE ATUAÇÃO

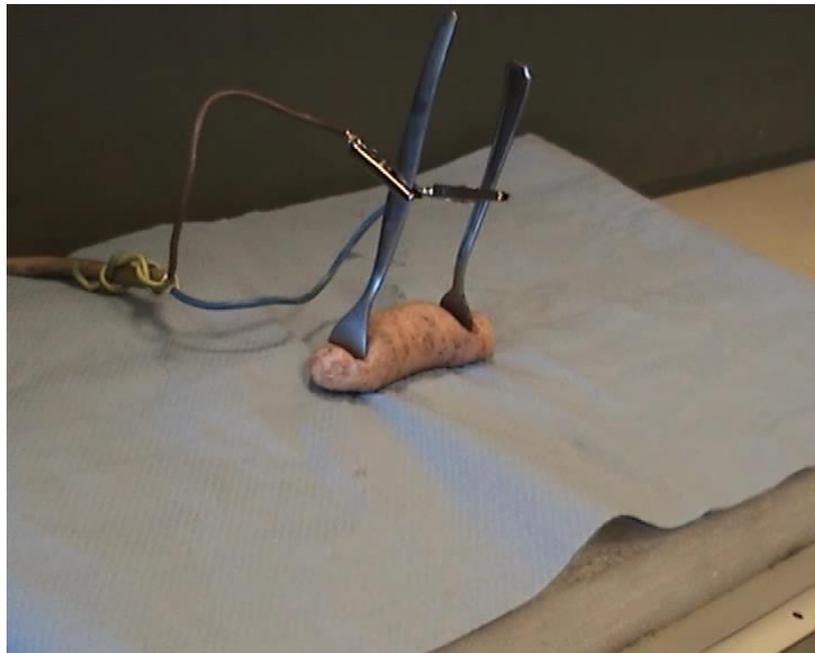




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Space Cooking: Feeding Astronauts on Mars-bound Missions

By Tariq Malik, Space.com Managing Editor | December 8, 2004 07:00am ET

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MORE ▾

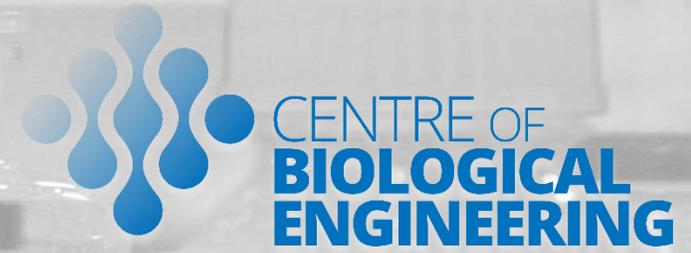


O caso do Aquecimento Óhmico



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Aquecimento Óhmico

- Produtos inovadores à base de proteína de soro de leite



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CONCLUSÕES



- ✓ Alimentação diversificada - proteína de origem em vegetais, microrganismos e insetos
- ✓ Tecnologias mais eficientes e amigas do ambiente – vantagem competitiva
- ✓ Reutilização/valorização de desperdícios alimentares (resíduos zero)
- ✓ Alimentos “frescos” com prazo de validade alargados e seguros
- ✓ Alimentos com benefícios para a saúde e bem-estar.





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Obrigado!!

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