



SINDIFIBRAS
SINDICATO DAS INDÚSTRIAS DE FIBRAS
VEGETAIS NO ESTADO DA BAHIA



Agave is a Hard Crude

Gonçalo Pereira

29/05/2024

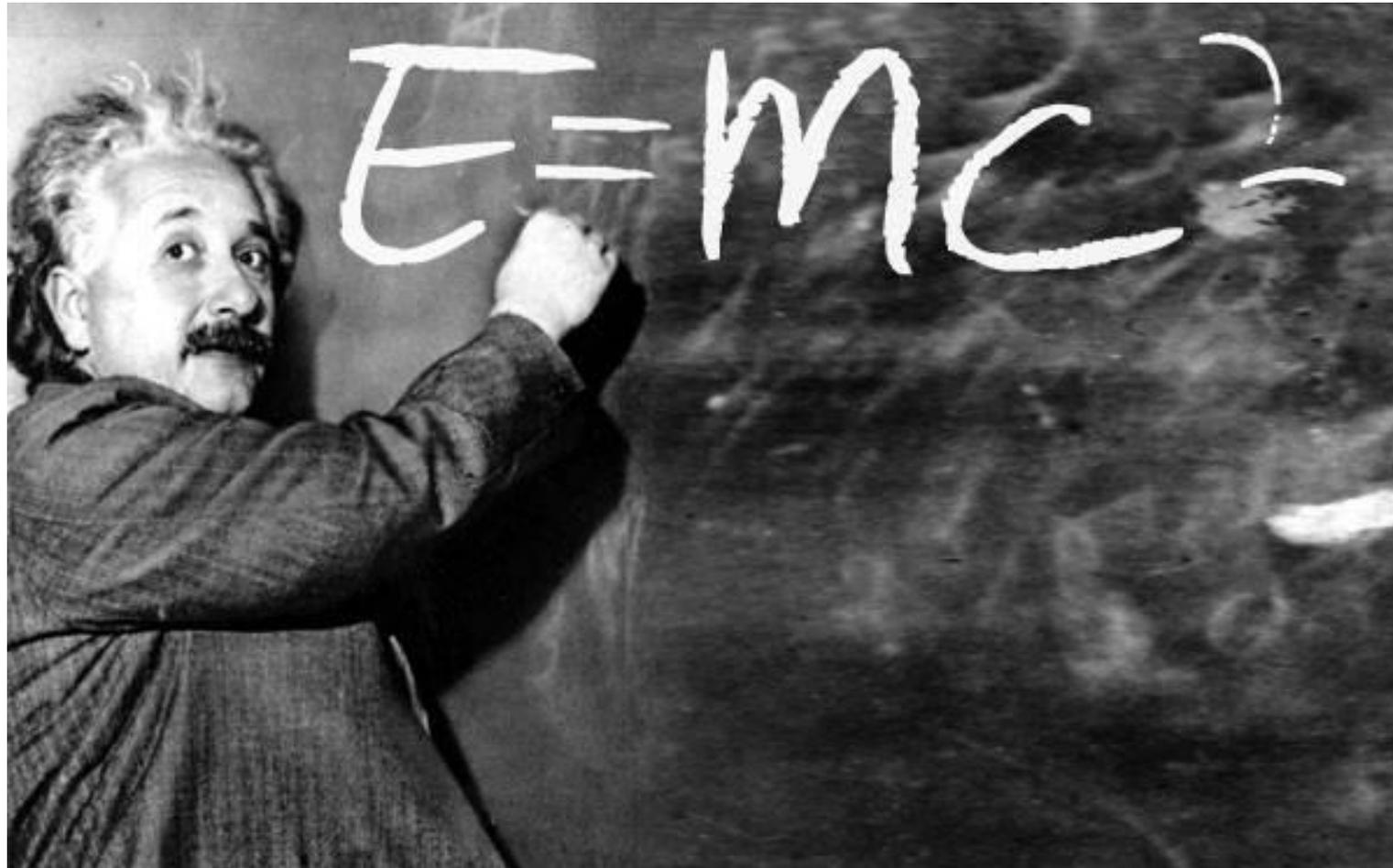


goncalopereiraunicamp

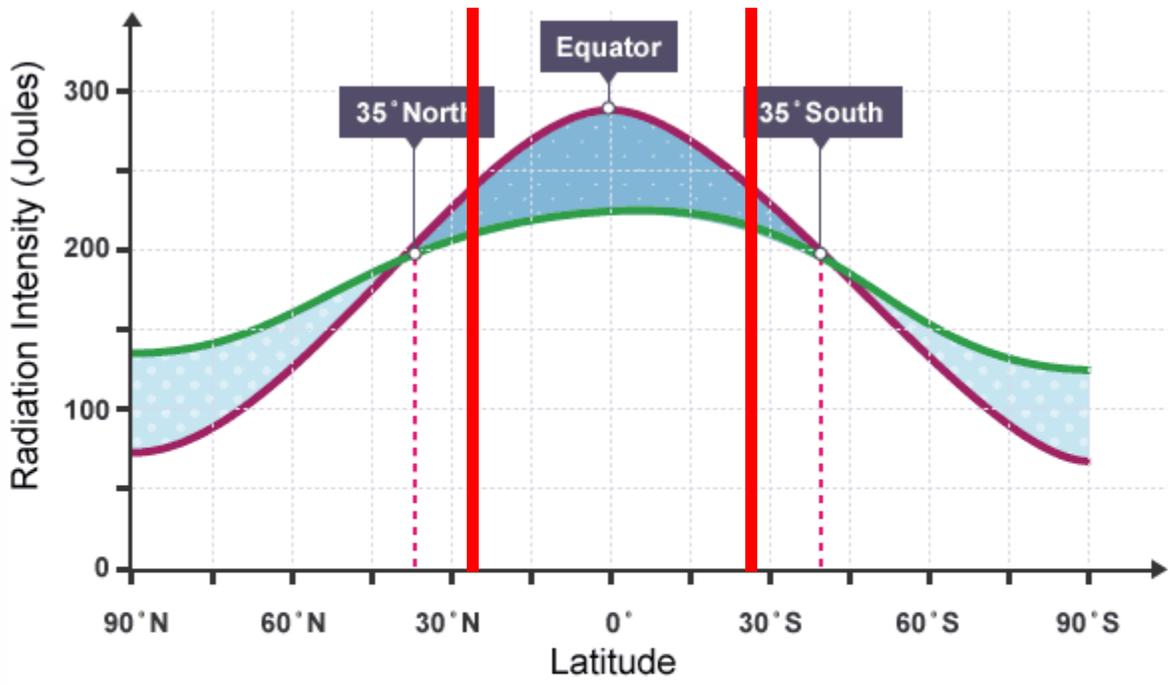
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TOP
2000
VOICES

Everything is Energy... With Information



The Global Scenario of Energyand Power



-  Short-wave solar radiation (insolation)
-  Long-wave terrestrial radiation
-  Areas of energy surplus
-  Areas of energy deficit

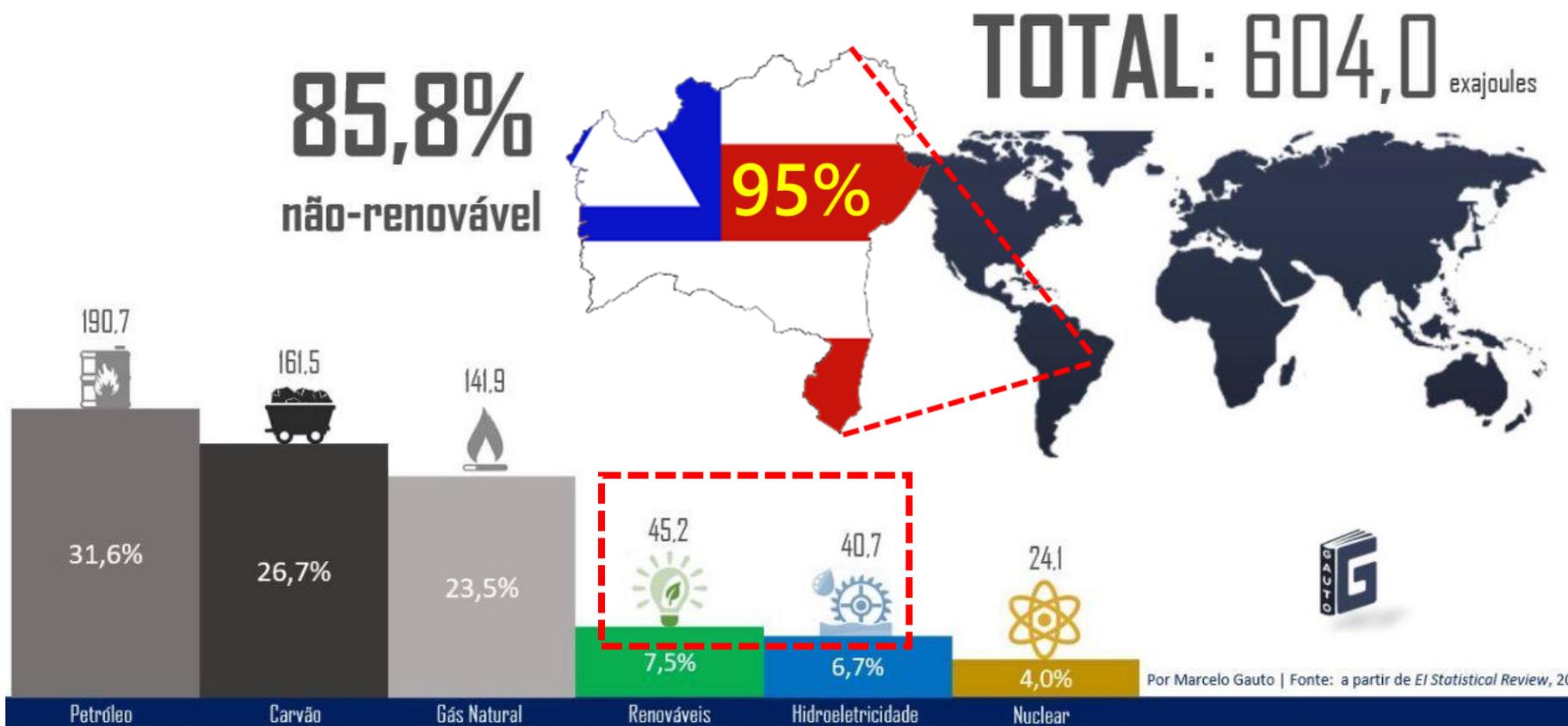
 Decision makers



We have a Problem in the World And Solutions

CONSUMO PRIMÁRIO DE ENERGIA NO MUNDO 2022

exajoules

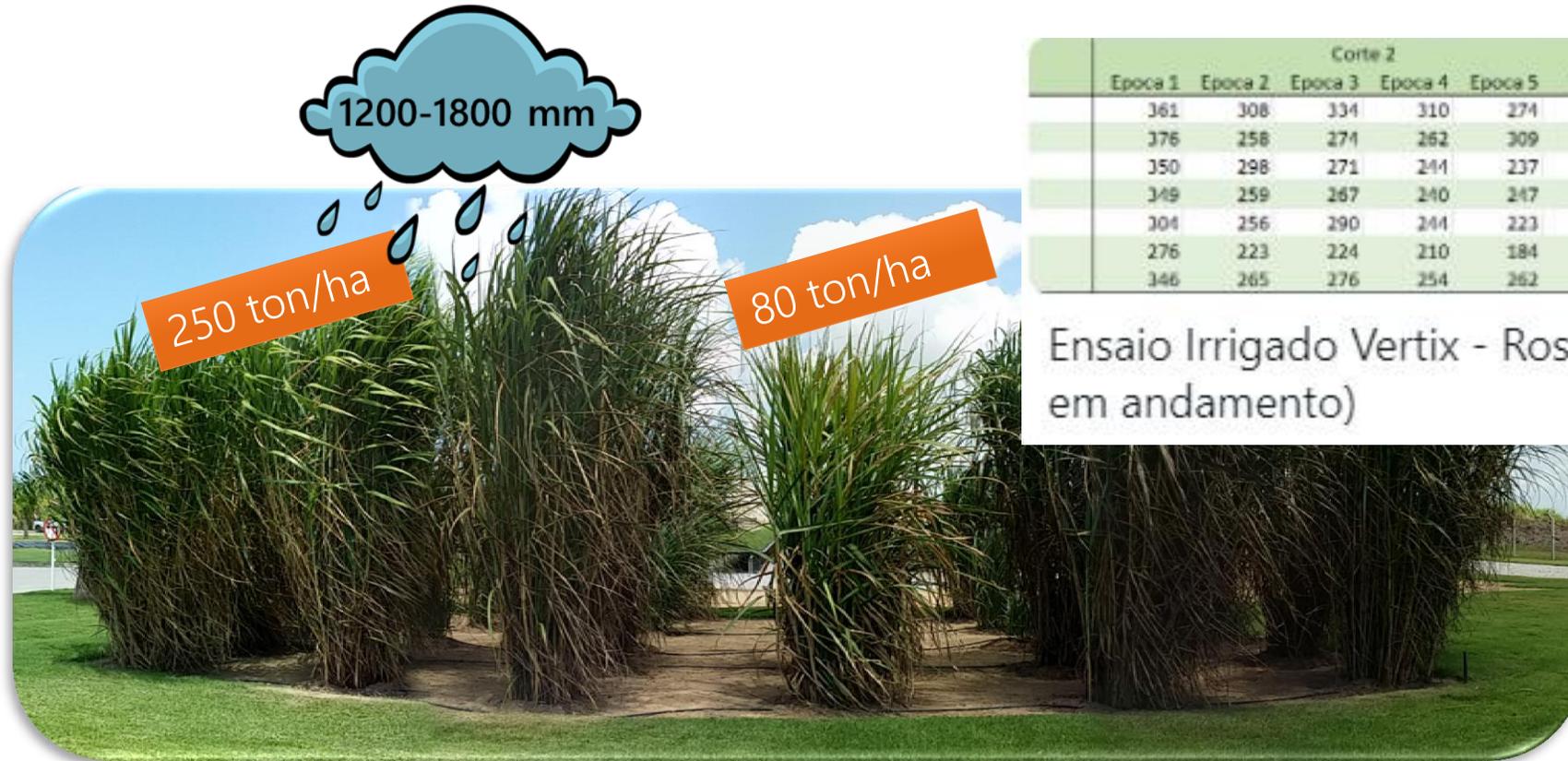


The Other Side of the Winds....



Freeing Up Genetics: Energy Cane

471 t/ha



Epoca 1	Corte 2					Média	Corte 3				
	Epoca 2	Epoca 3	Epoca 4	Epoca 5	Epoca 1		Epoca 2	Epoca 3	Epoca 4	Epoca 5	
361	308	334	310	274	317	471	255				
376	258	271	262	309	296	368	184				
350	298	271	241	237	280	304	205				
349	259	267	240	247	272	300	228				
304	256	290	244	223	263	209	218				
276	223	224	210	184	223	283	218				
346	265	276	254	262	281	334	209				

Ensaio Irrigado Vertix - Rosário BA (Terceiro corte em andamento)

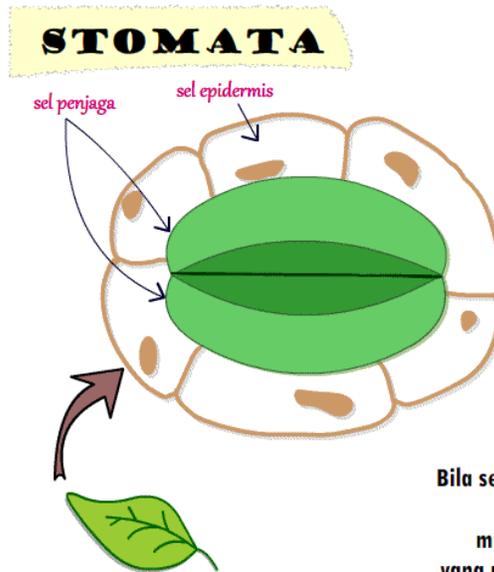
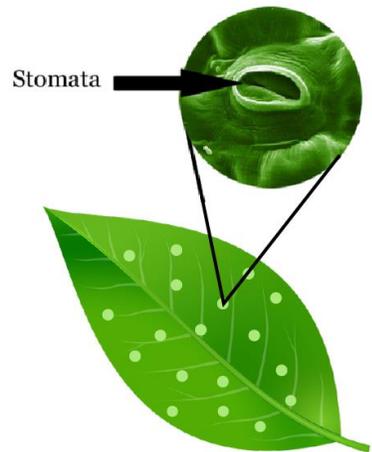
11:54

Energy-cane

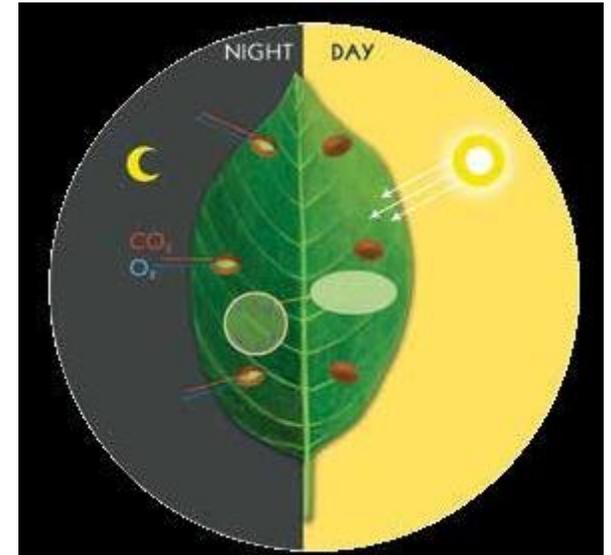
Sugarcane

Energy-cane

Cam Photosynthesis



Bila sel penutup menyerap air secara osmosis, maka sel-sel tersebut mengembang atau membengkak yang menyebabkan stoma membuka

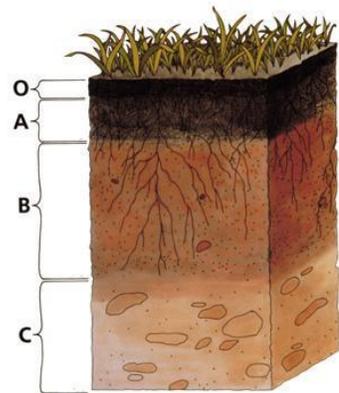


Agave Biomass



426 kg

Extreme Physiology



Potential for Ethanol and Biogenic CO₂ Production

Journal of Cleaner Production 261 (2020) 121283



Agave: A promising feedstock for biofuels in the water-energy-food-environment (WEFE) nexus



Xiaoyu Yan ^{a, b, *, 1}, Kendall R. Corbin ^{c, 1, 2}, Rachel A. Burton ^c, Daniel K.Y. Tan ^d

^a Environment and Sustainability Institute, University of Exeter, UK

^b College of Engineering, Mathematics and Physical Sciences, University of Exeter, UK

^c ARC Centre of Excellence in Plant Cell Walls, University of Adelaide, Australia

^d The University of Sydney, Sydney Institute of Agriculture, School of Life and Environmental Sciences, Faculty of Science, Sydney, NSW, 2006, Australia



28 MM Ha

Ha	Litros
1	7.414
1.000	7.414.000
1.000.000	7.414.000.000
10.000.000	74.140.000.000

3,3 MM ha – 30 Bi Litros

22 Bi Kg CO₂



So Big that Fail....

DIRECT

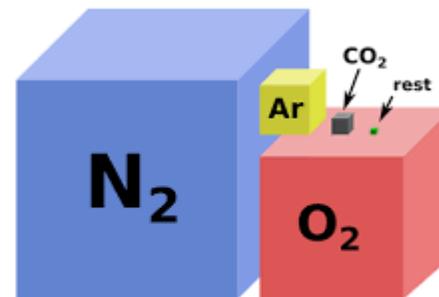


Apagão: Falha pode ter ocorrido por excesso de energias eólica e solar no sistema, dizem fontes

Pessoas ligadas à Eletrobras dizem que o problema foi em uma linha da empresa no Ceará; ministro de Minas e Energia havia dito que não sabia se a estrutura afetada era da companhia



6:50 PM · 30 de mai de 2023 · 11,3 mil Visualizações



imgflip.com

The Phenomenon



exame.

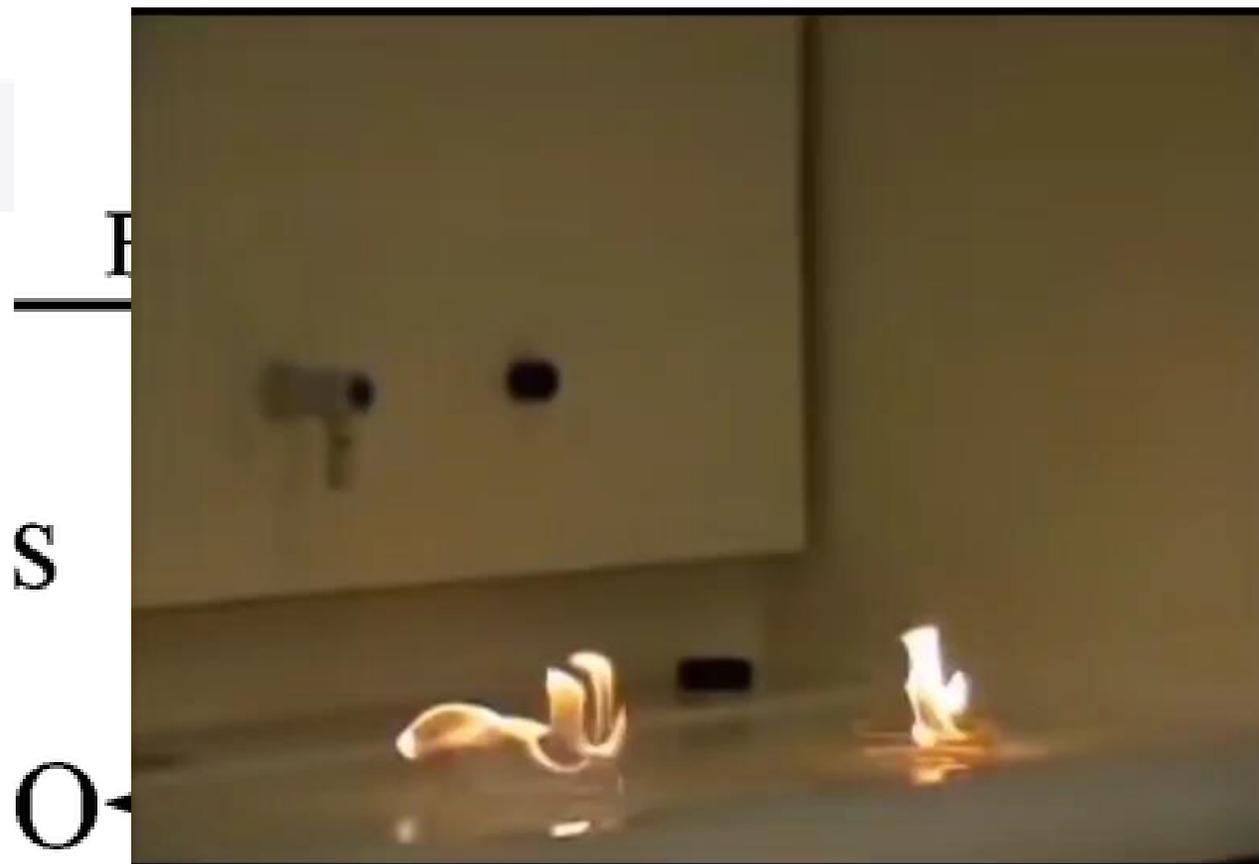
ASSINE

Ciência

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Cientistas chineses transformam CO₂ em açúcar puro; entenda

Este feito representa um avanço fundamental no campo da síntese artificial de açúcar e promete transformar as perspectivas da produção desse componente





Sistema FIEB



PELO FUTURO DA INOVAÇÃO



UNICAMP

BRAVE

Brazilian Agave
Development

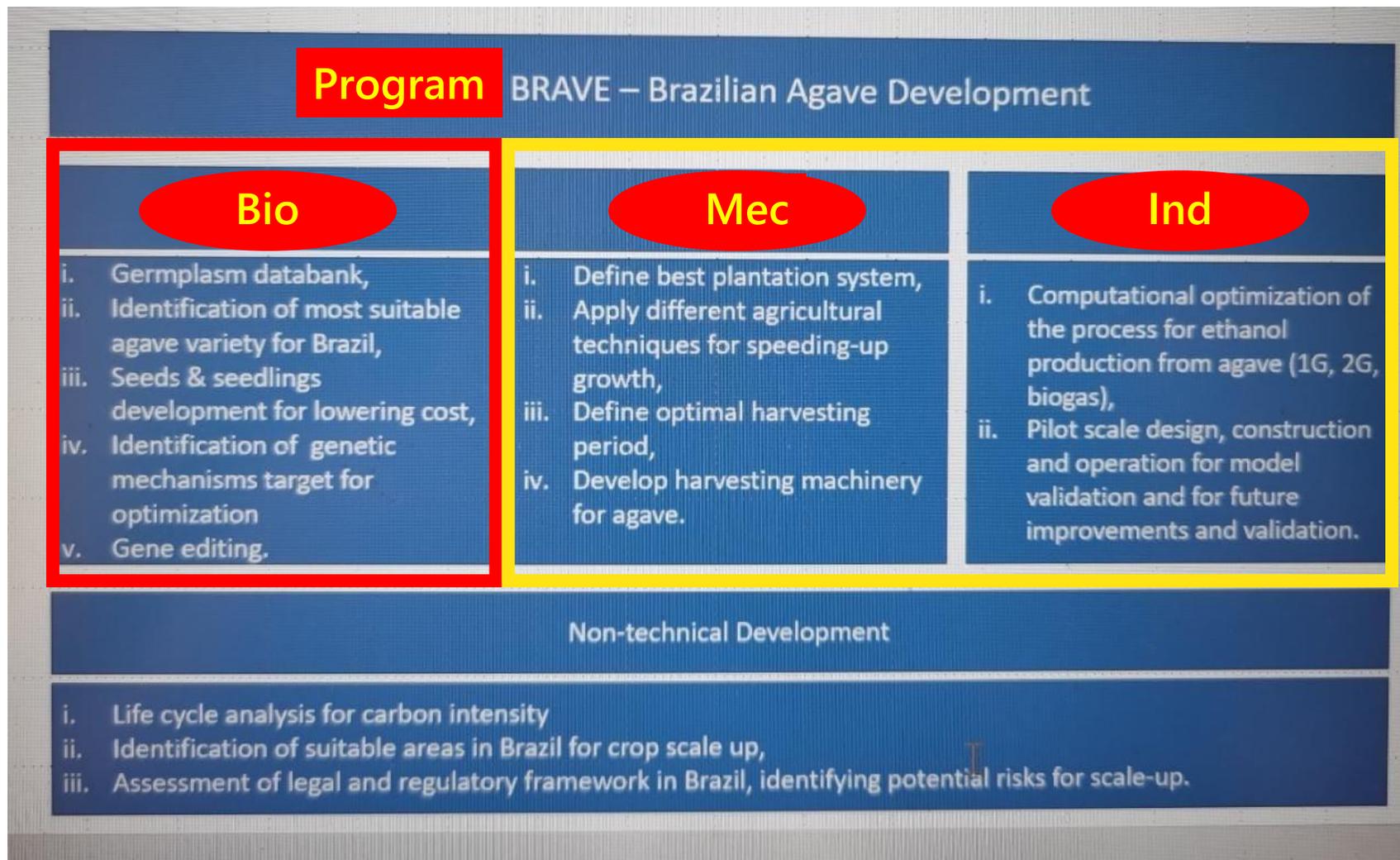


EMBRAPII



anp

BRAVE: Brazilian Agave Development



SENAI CIMATEC



CIMATEC SERTÃO



Sisal Biorefinery



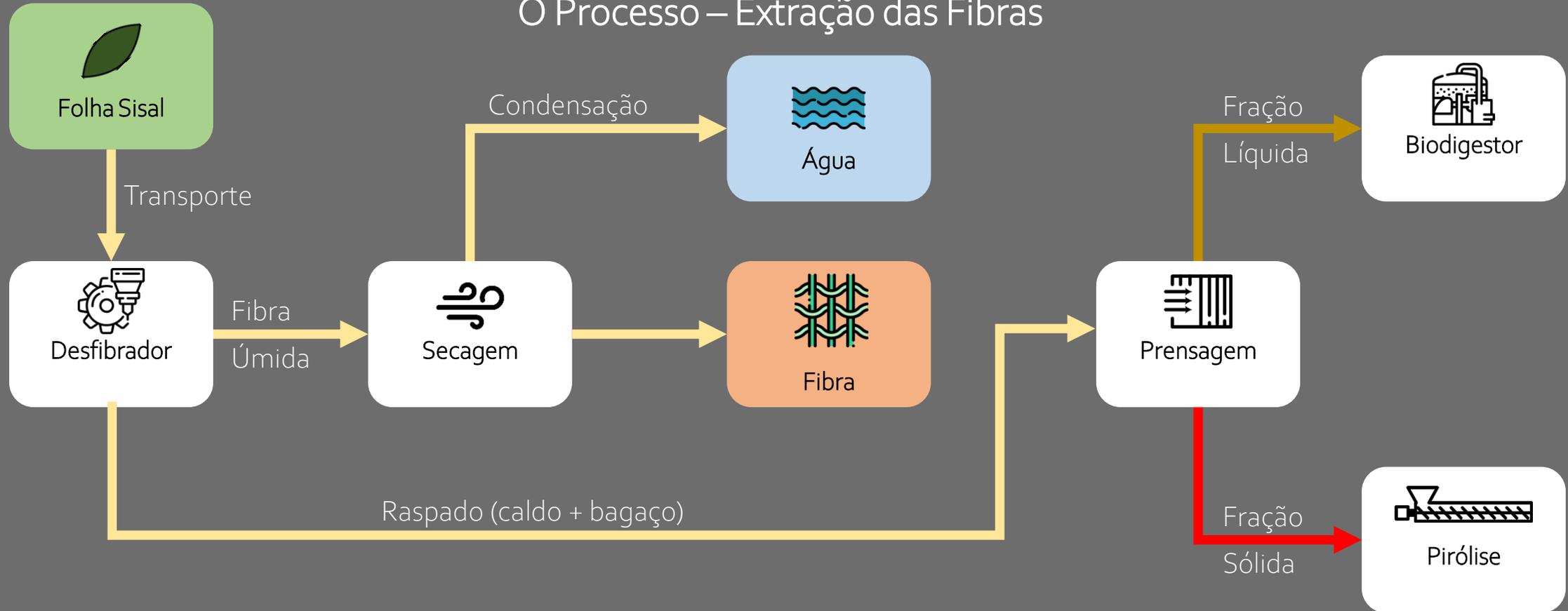


Arrakis

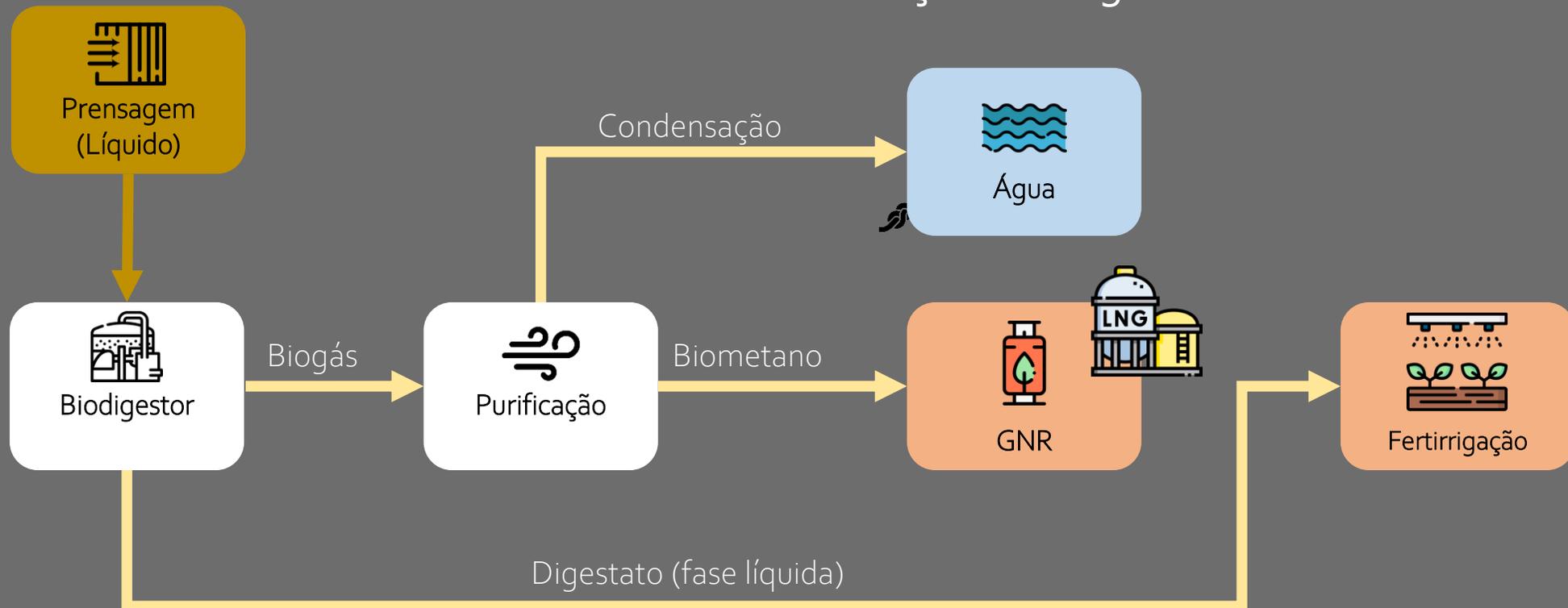
Sertão – Água – Energia – Agave



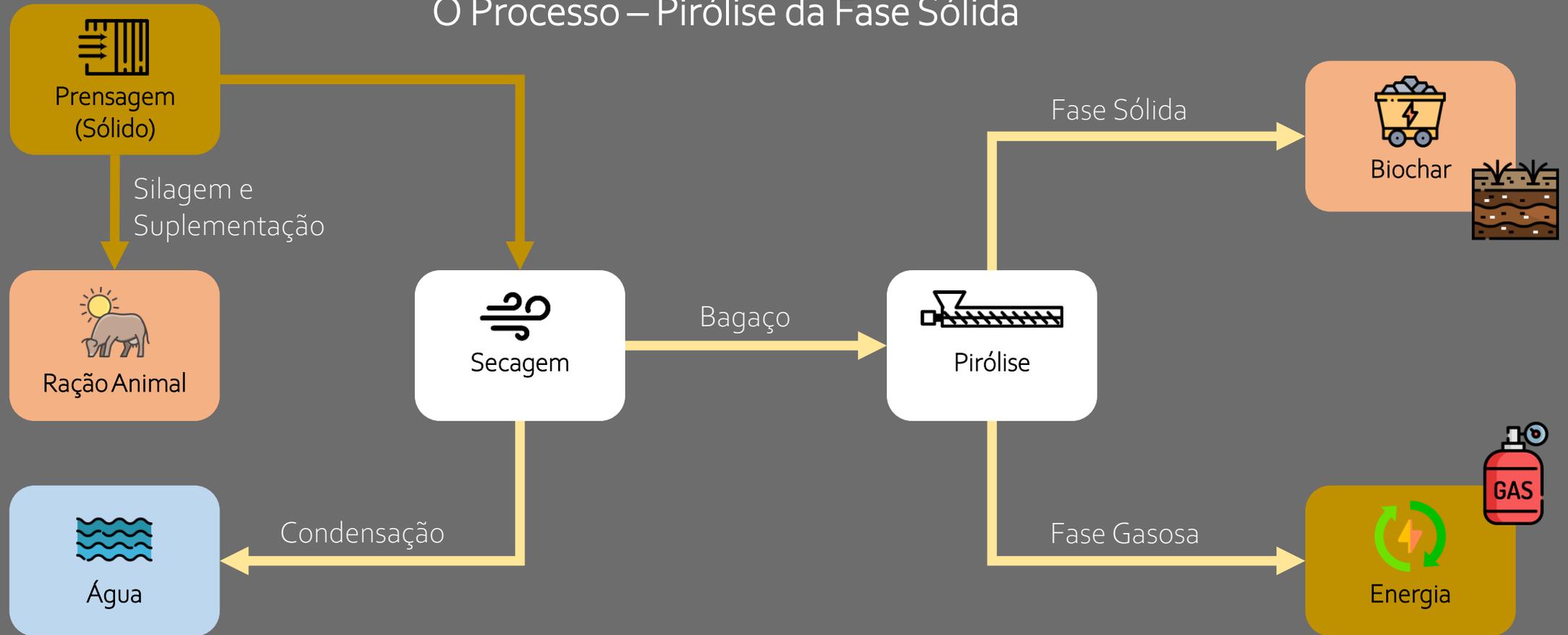
O Processo – Extração das Fibras



O Processo – Produção de Biogás



O Processo – Pirólise da Fase Sólida



Potencial Tecnológico

Potenciais Produtivos (por ha ano)	 Simples A. Sisalana	 Dupla A. Sisalana	 Simples H11648	 Dupla H11648
 Fibras Secas (ton)	2,5	6,5	4	10,5
 Biochar (ton)	0,7	1,5	1	2,4
 GNR (Nm ³)	1090	1820	1730	2898

Potencial Tecnológico

Potenciais Produtivos (por ha ano)	 Simples A. Sisalana	 Dupla A. Sisalana	 Simples H11648	 Dupla H11648
 Biofertilizante (ton)	41	68	65	109
 Ração Animal (ton)	4,7	5	7,5	7,8
 Água (m ³)	4	9,5	6	15

Mercado Precificado

Potenciais de Mercado (em mil R\$/ha ano)	 Simples A. Sisalana	 Dupla A. Sisalana	 Simples H11648	 Dupla H11648
 Fibras secas R\$ 3,00/kg	6,8	18	11	28
 Biochar R\$ 10,10/kg	6,2	14	9,6	22
 GNR R\$ 3,18/Nm ³	3,5	5,8	5,4	9,2
 Biofertilizante R\$ 0,10/kg	4,1	6,9	6,5	11

Biochar: Productive Carbon Sequestration

Sustainable Business

nature microbiology



Article

<https://doi.org/10.1038/s41564-023-01520-w>

Soil microbiome indicators can predict crop growth response to large-scale inoculation with arbuscular mycorrhizal fungi

Received: 16 January 2023

Accepted: 11 October 2023

Published online: 29 November 2023

Stefanie Lutz ^{1,7}, Natacha Bodenhausen ^{2,7}, Julia Hess¹,
Alain Valzano-Held ¹, Jan Waelchli ³, Gabriel Deslandes-Hérolde ^{3,4,6},
Klaus Schlaeppi ^{3,7}  & Marcel G. A. van der Heijden ^{1,5,7} 

54 fields in Switzerland and quantified the effects on maize growth. Growth response to AMF inoculation was highly variable, ranging from -12% to +40%. With few soil parameters and mainly soil microbiome indicators, we



A Soil to Carbonize

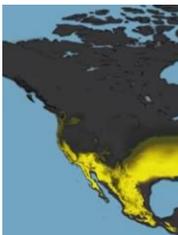


bioFuel for Food

PIB per capita 2019

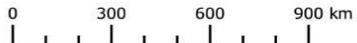


21 -



Depois

Escala: 1:27000000



Human Capital is the Key



MUNDO

Entenda como Cingapura deixou de ser uma ilha para se tornar um dos mais ricos do mundo

Cingapura é o quarto país mais rico do mundo, apenas superado por Luxemburgo e Macau, de acordo com o poder de compra de...

Depois de deixar para trás o domínio britânico e conseguir a independência da Malásia em 1965, Cingapura se tornou um país autônomo liderado por Lee Kuan Yew.

Ele ocupou o cargo de primeiro-ministro por mais de 30 anos. Ele foi o arquiteto do chamado "milagre econômico".



FORBES > FORBES MAGAZINE > FORBES ASIA

Biggest Invention: The Transistor, The Internet...Or The Air-Conditioner? (Hint) None Of The Above

Eamonn Fingleton Contributor
A sharp eye on media bias, official propaganda, and globaloney.

Follow

Jul 5, 2015, 11:21am EDT

When Lee Kuan Yew, the late Singaporean patriarch, was asked to name the twentieth century's most consequential invention, he gave a characteristically counterintuitive answer. Not for him anything so obvious as television, antibiotics, the transistor, or the internet.

His suggestion: the air-conditioner. It is a topical

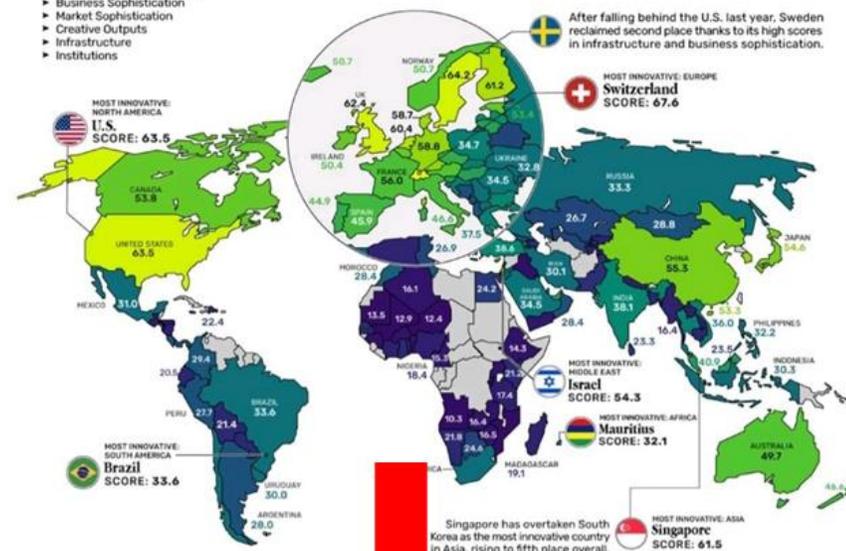
Global Innovation Index

We show global innovation rankings across 132 countries at a time of rapid technological advancement.

2023

Countries were analyzed across 80 indicators in the following categories:

- Knowledge & Technology Outputs
- Human Capital & Research
- Business Sophistication
- Market Sophistication
- Creative Outputs
- Infrastructure
- Institutions



Top 10 Countries



A bright Summary





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