

Biochar in Czech Republic

Biochar Platform, z.s.

Lukáš TRAKAL



Faculty of
Environmental Sciences

Wednesday, 1 July 2026 | Wieselburg, Austria



CZU Biochar Research Centre

BIOCHAR
PLATFORM



Registered association – established jointly with five other entities (research institution and SMEs) for the purpose of communication and coordination of activities related to biochar

BIOCHAR
Systems
Research Group

Research group at Faculty of Environmental Sciences – related to biochar research including LCA-TEA analyses

CZU BIOCHAR
RESEARCH CENTRE



Research Centre – coordinating biochar research across individual faculties and establishing a central facility equipped with a pilot-scale pyrolysis unit

***Funding sources:** 1) University; 2) National; 3) International; and 4) Commercial*

➤ **CZU BIOCHAR plus** (submitted project HORIZON-WIDERA-2026-02, Twinning)



Biochar in different environmental compartments



Forest-based biochar



Biochar for sustainable agriculture and soil fertility



Socio-economic analyses and sustainability



Biochar for energy sustainability



Biochar for developing countries

Biochar on Web of Science



approx. 52 000 publications

- 15 000 in Europe ($\approx 30\%$)
- 2 000 in V4 countries (141 highly-cited papers $\approx 7\%$)
- 581 in CZ; **119 at CZU** ($\approx 20\%$)

Seminal publication by prof. Lehmann (2007)

Vol 447|10 May 2007

nature

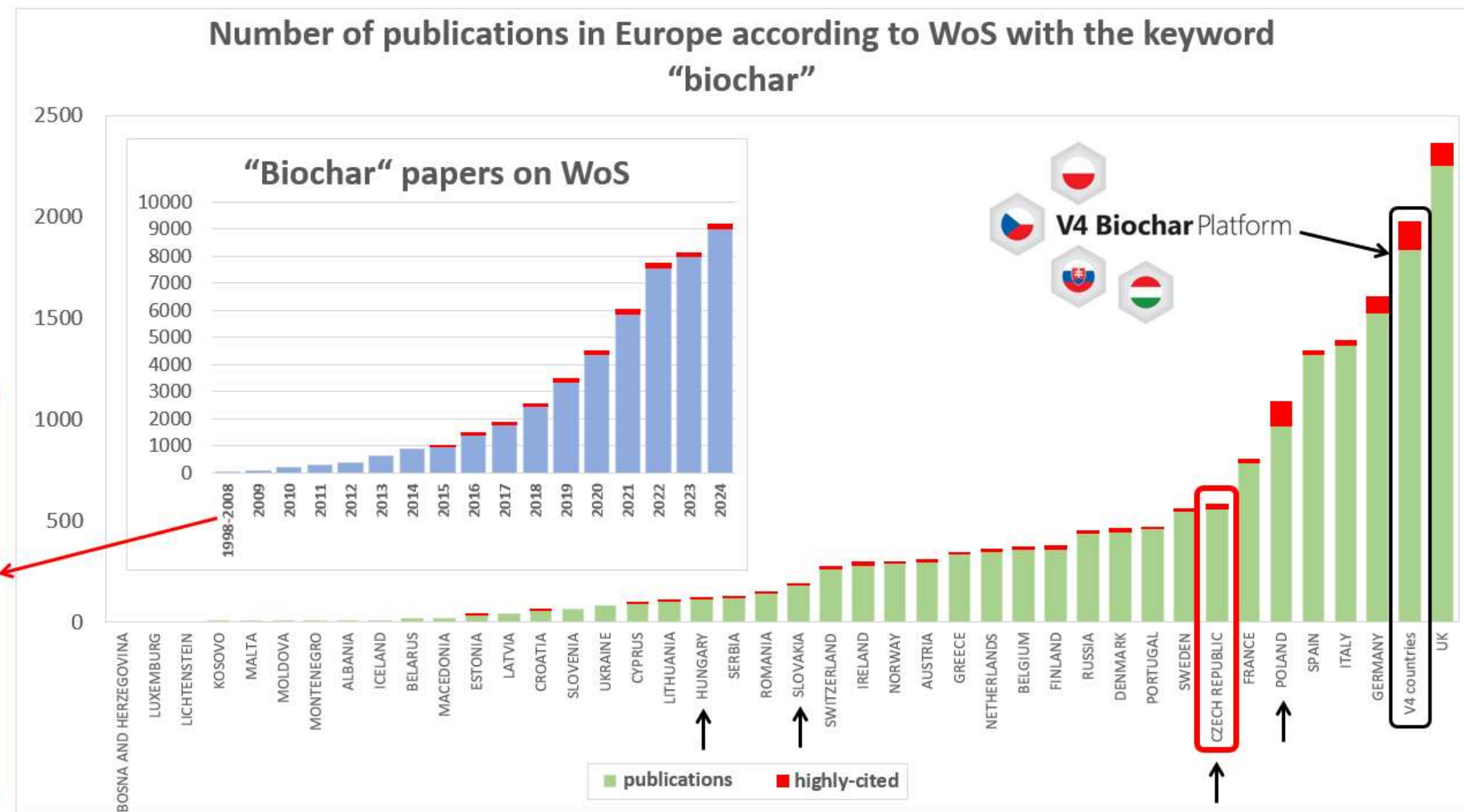


COMMENTARY

A handful of carbon

Locking carbon up in soil makes more sense than storing it in plants and trees that eventually decompose, argues **Johannes Lehmann**. Can this idea work on a large scale?

"Biochar offers the chance to turn bioenergy into a carbon-negative industry."



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Author, reviewed in 14. 11. 2025

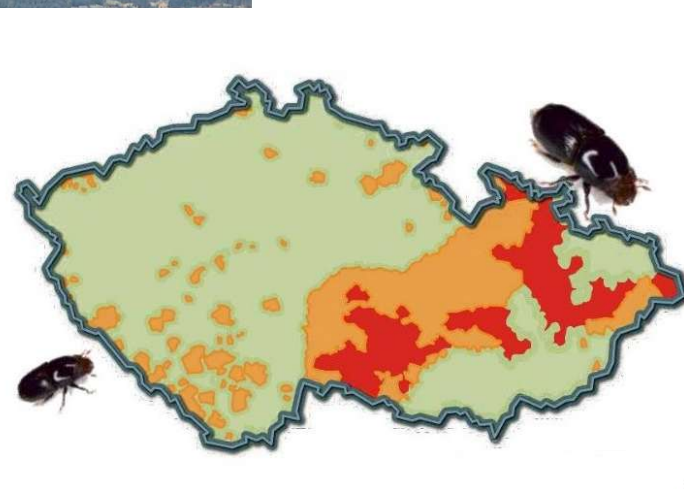


Biochar practical examples from CZE

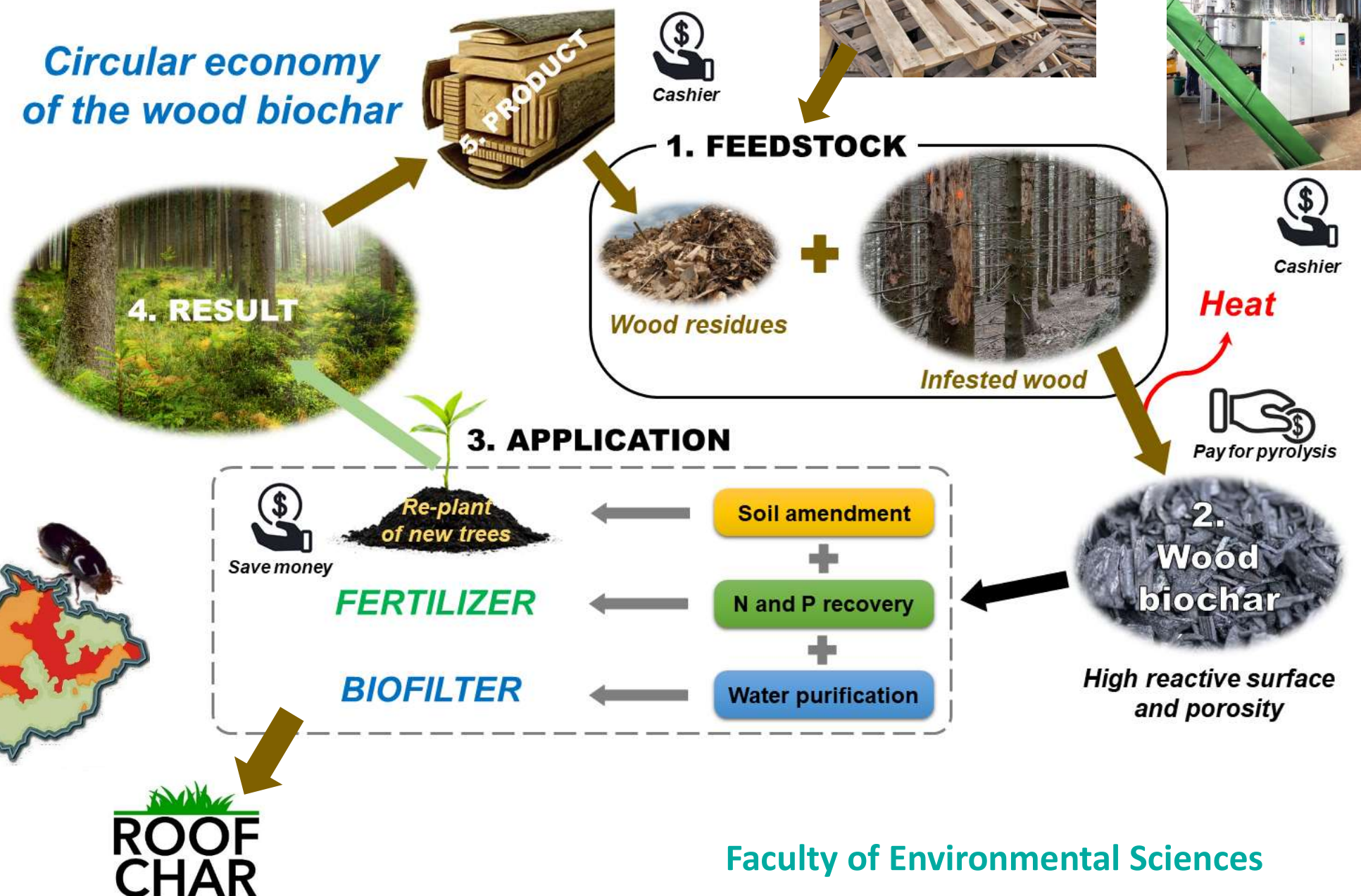
Woody biochar – 300 tons/year

Bark beetle calamity in CR

53 mil. m³ of the spruce wood is dead from 80% – suitable only for burning
The cause of the calamity is drought (55% of the area in CR was affected this summer)

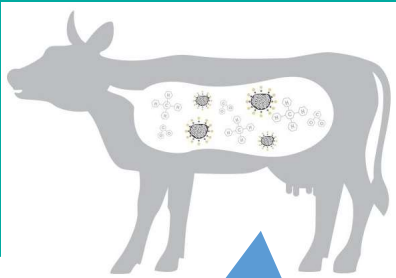


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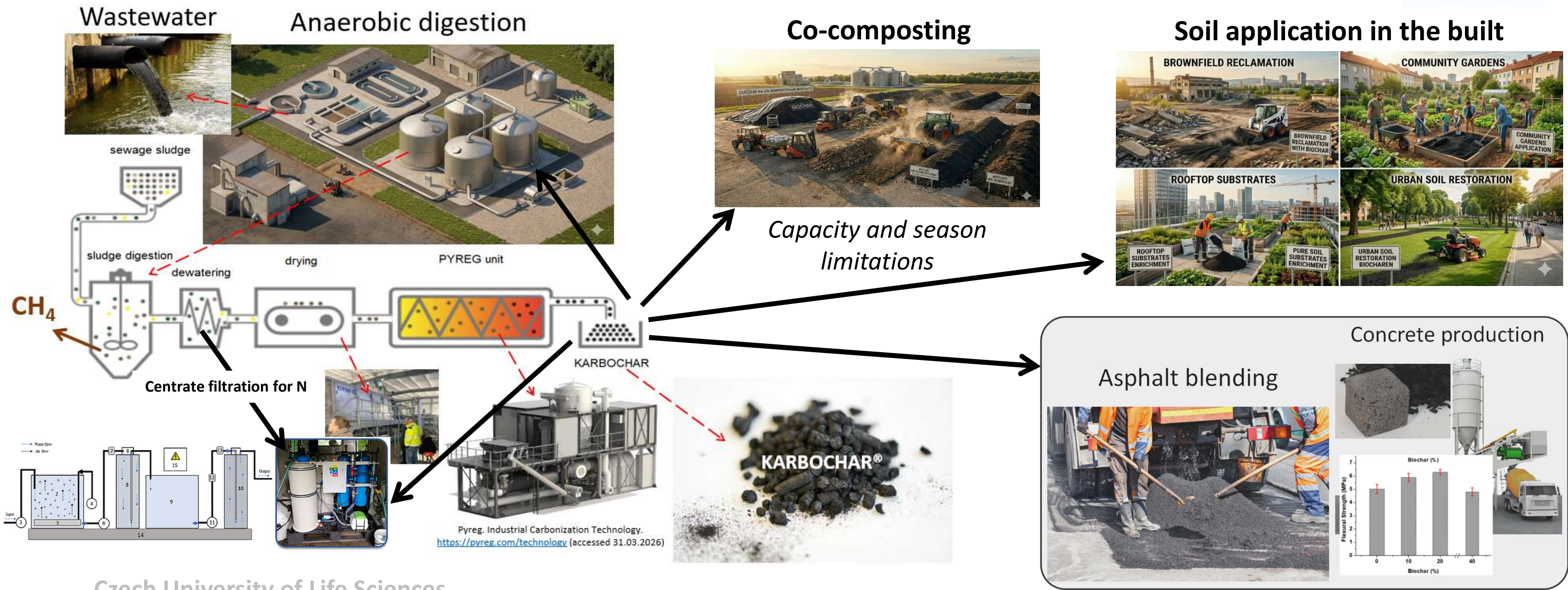


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Agroresidues biochar – 700 tons/year



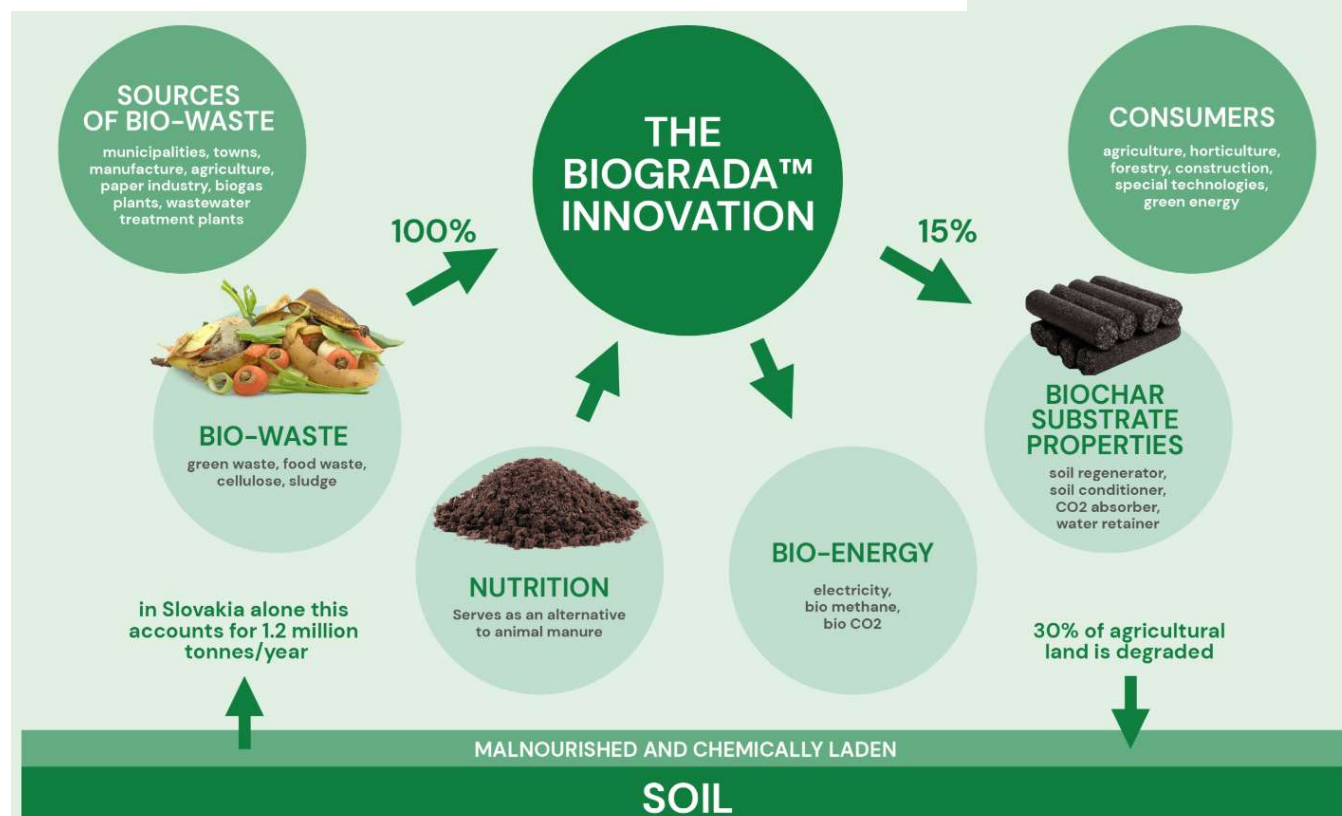
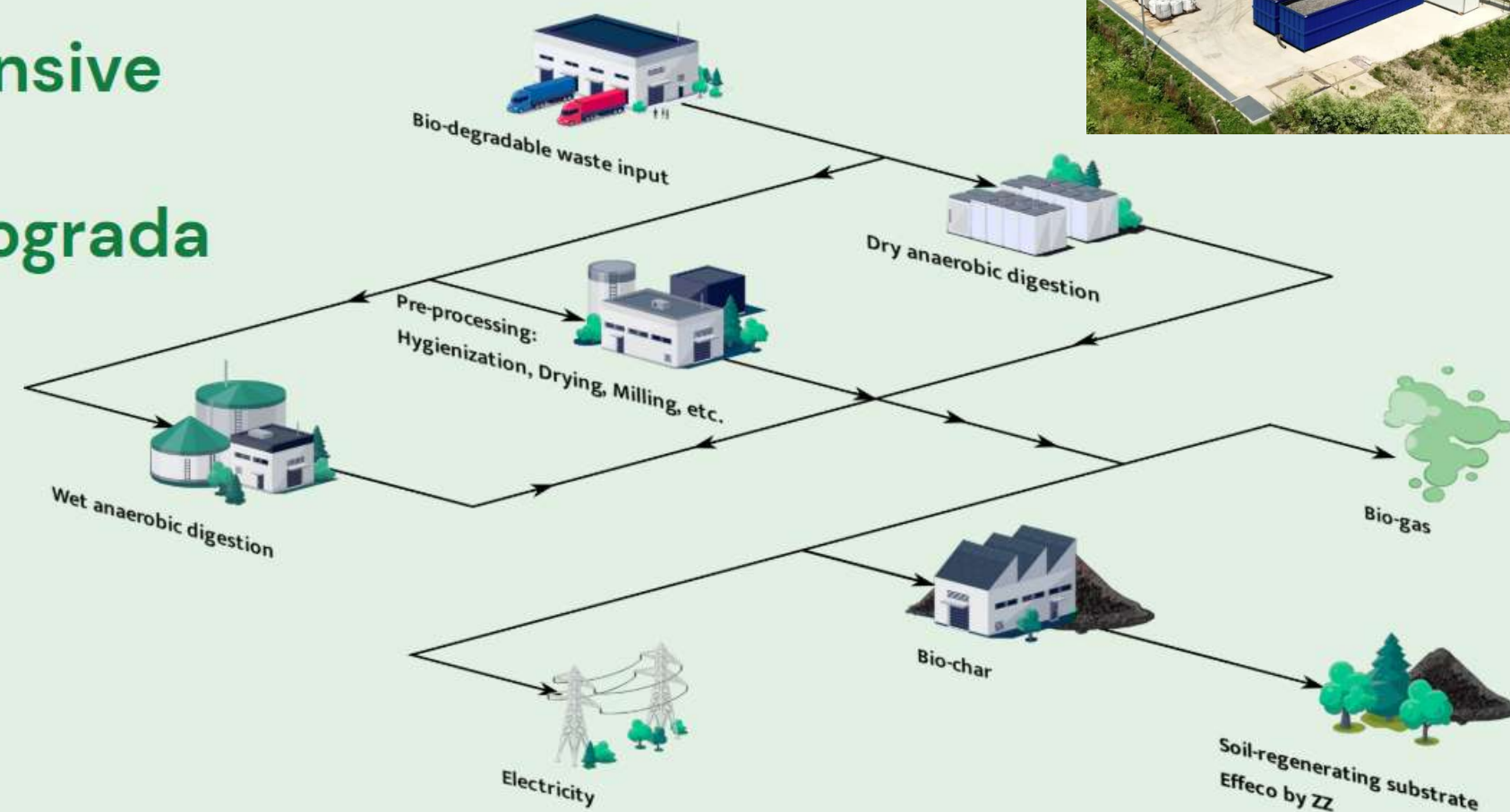
„Smart C-Sponge City“ Concept with Sludgechar



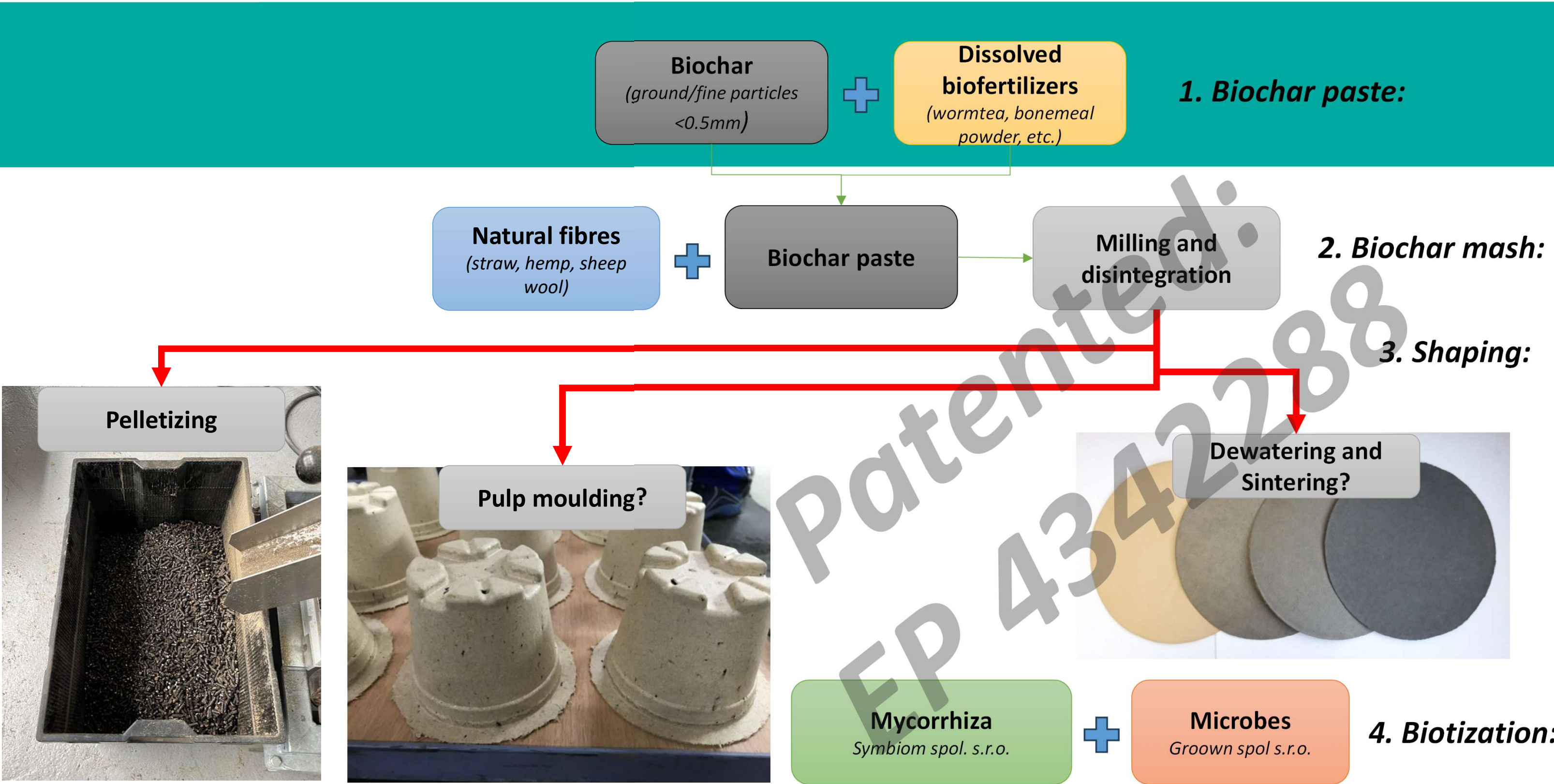
Sustainable biochar solution from SVK



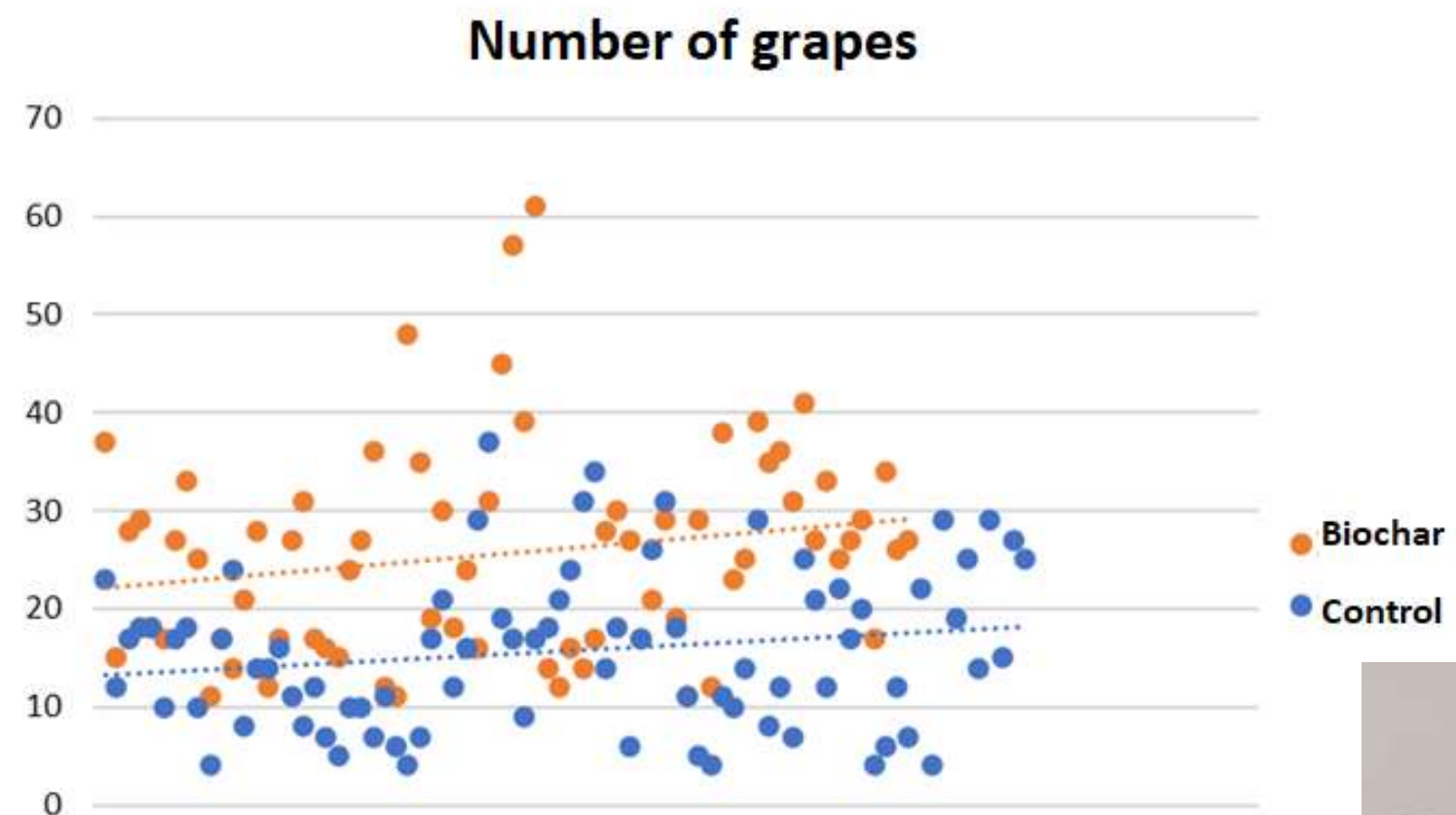
Comprehensive solution scheme Biograda



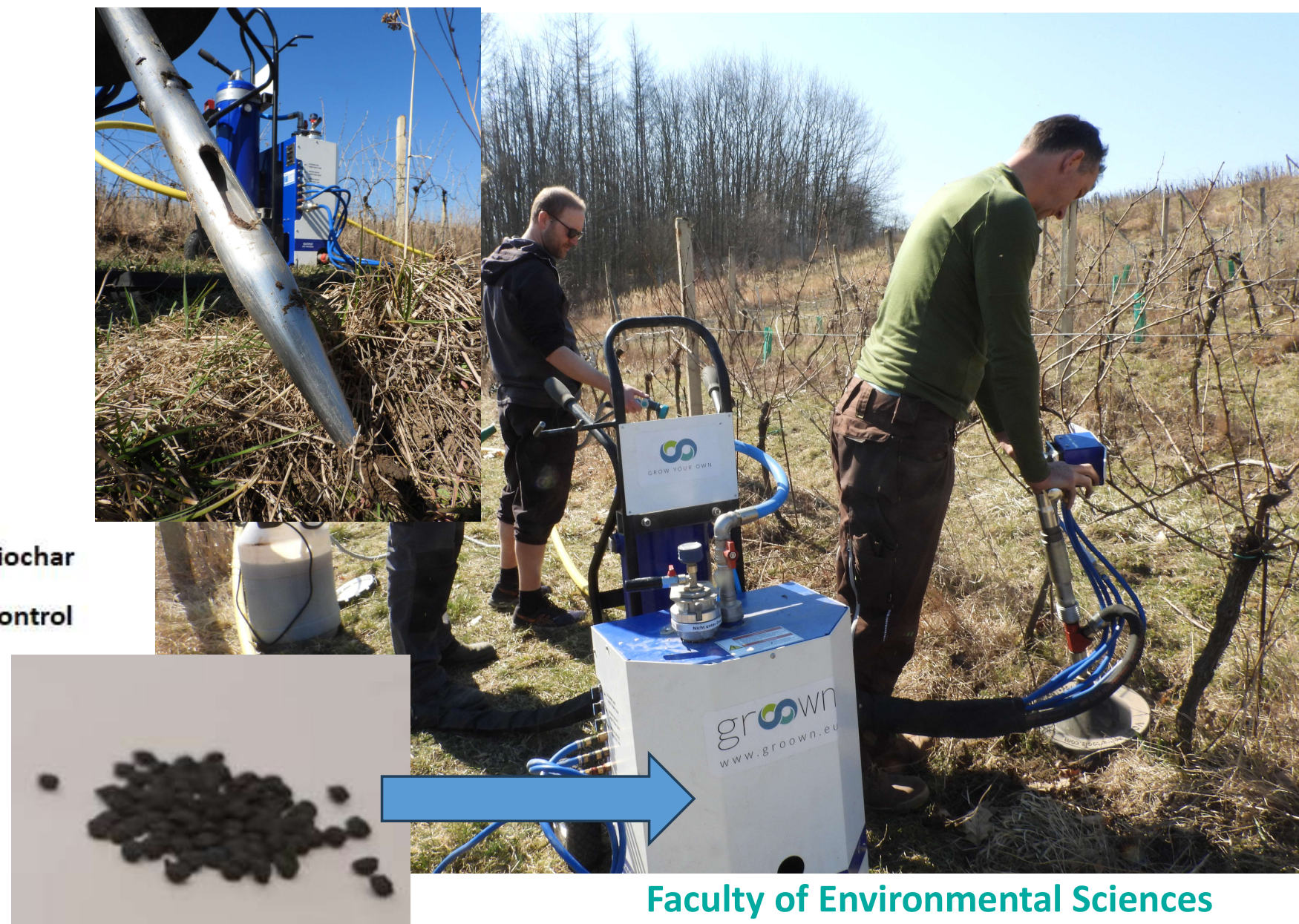
Comprehensive Biograda™ Solutions - Biograda



High-pressure injection

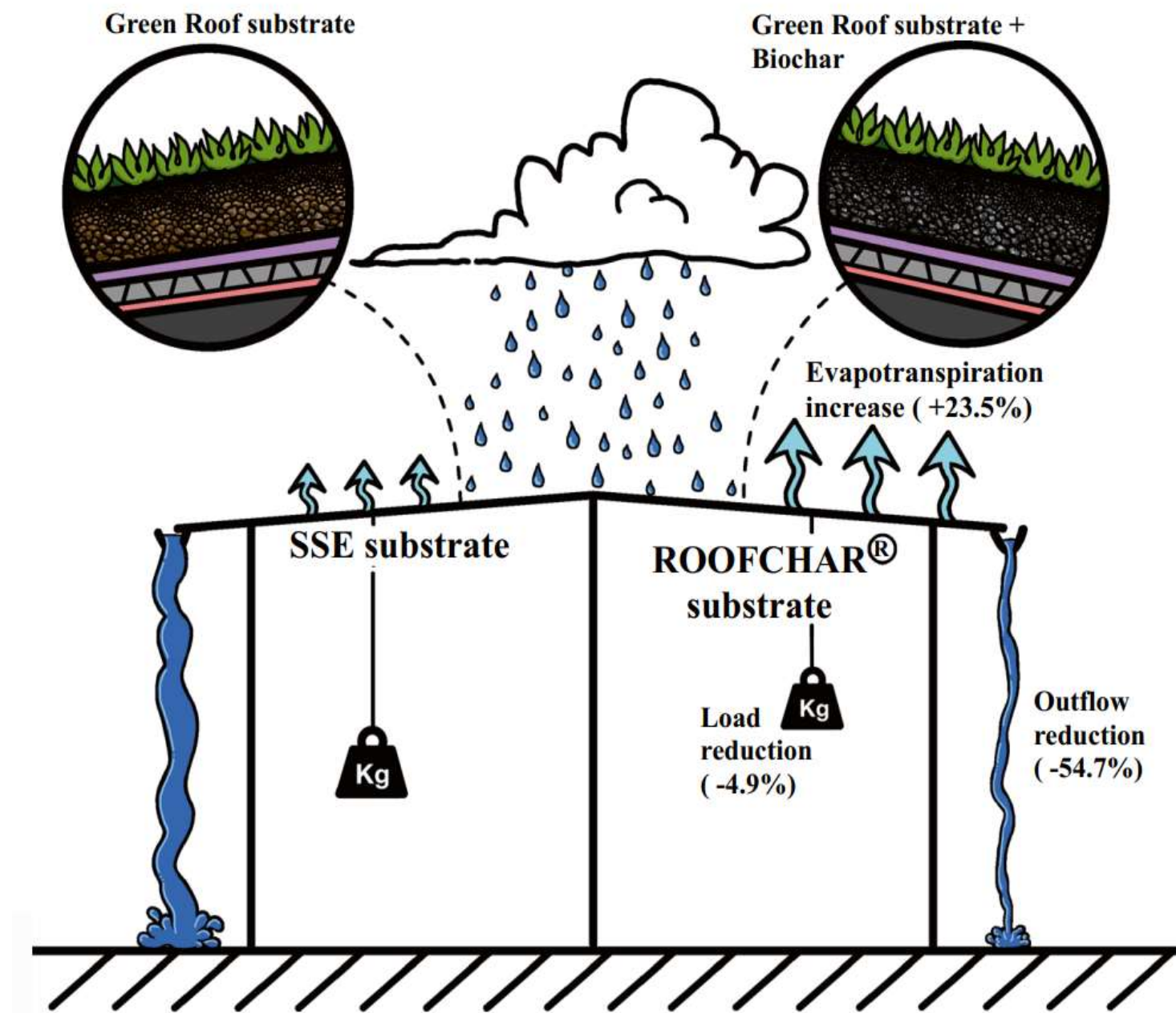
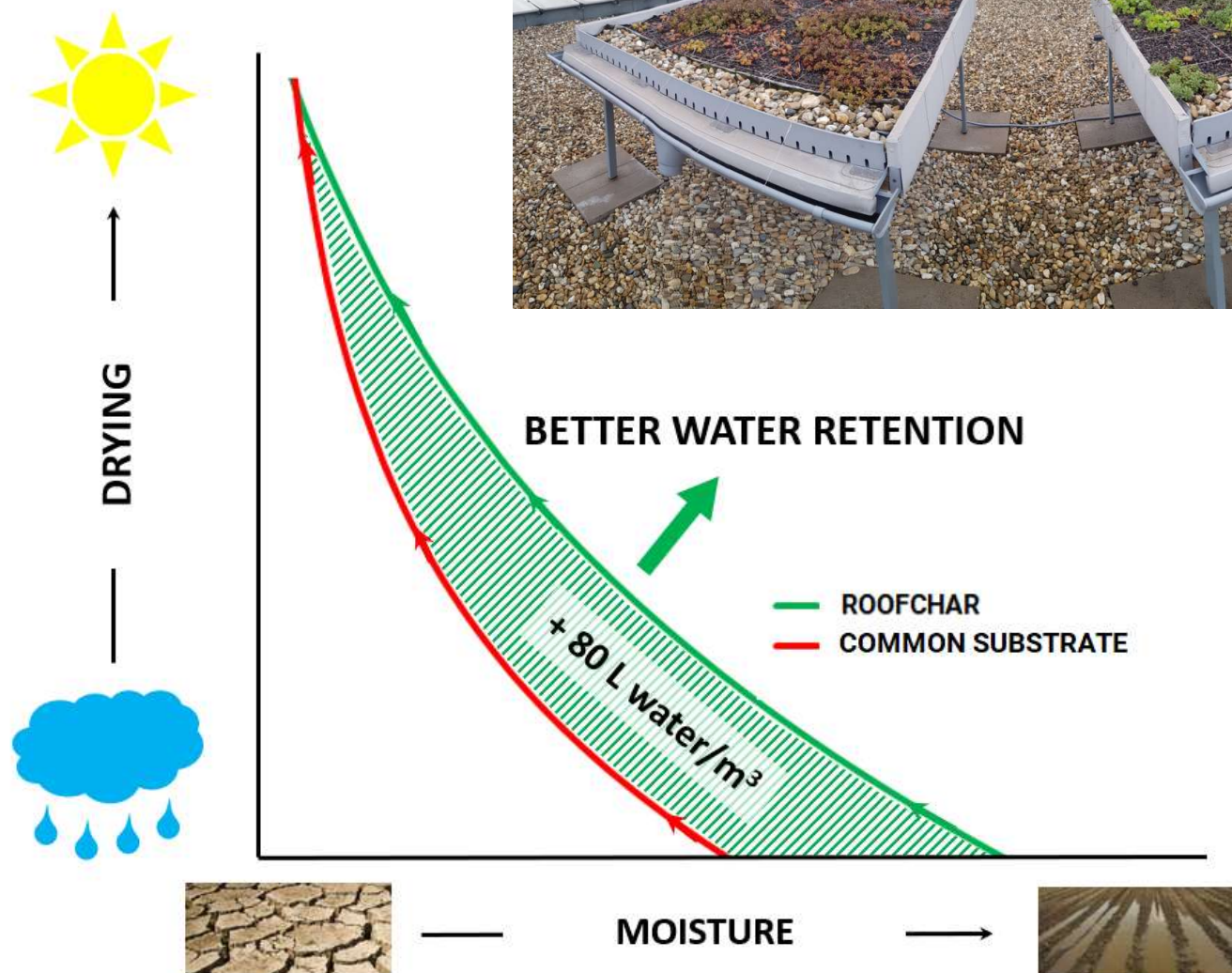


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ROOFCHAR® in rooftop substrates



Thank you for you attention

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on social networks

