

WELCOME TO THE



EUROPEAN CARBON FARMING SUMMIT

5-6-7 MARCH 2024

VALENCIA, SPAIN



#CARBONFARMINGSUMMIT #EUCARBONFARMING





FG 1.2 Assessing the Economic Impact of the Co-Benefits of Increasing Soil Organic Matter

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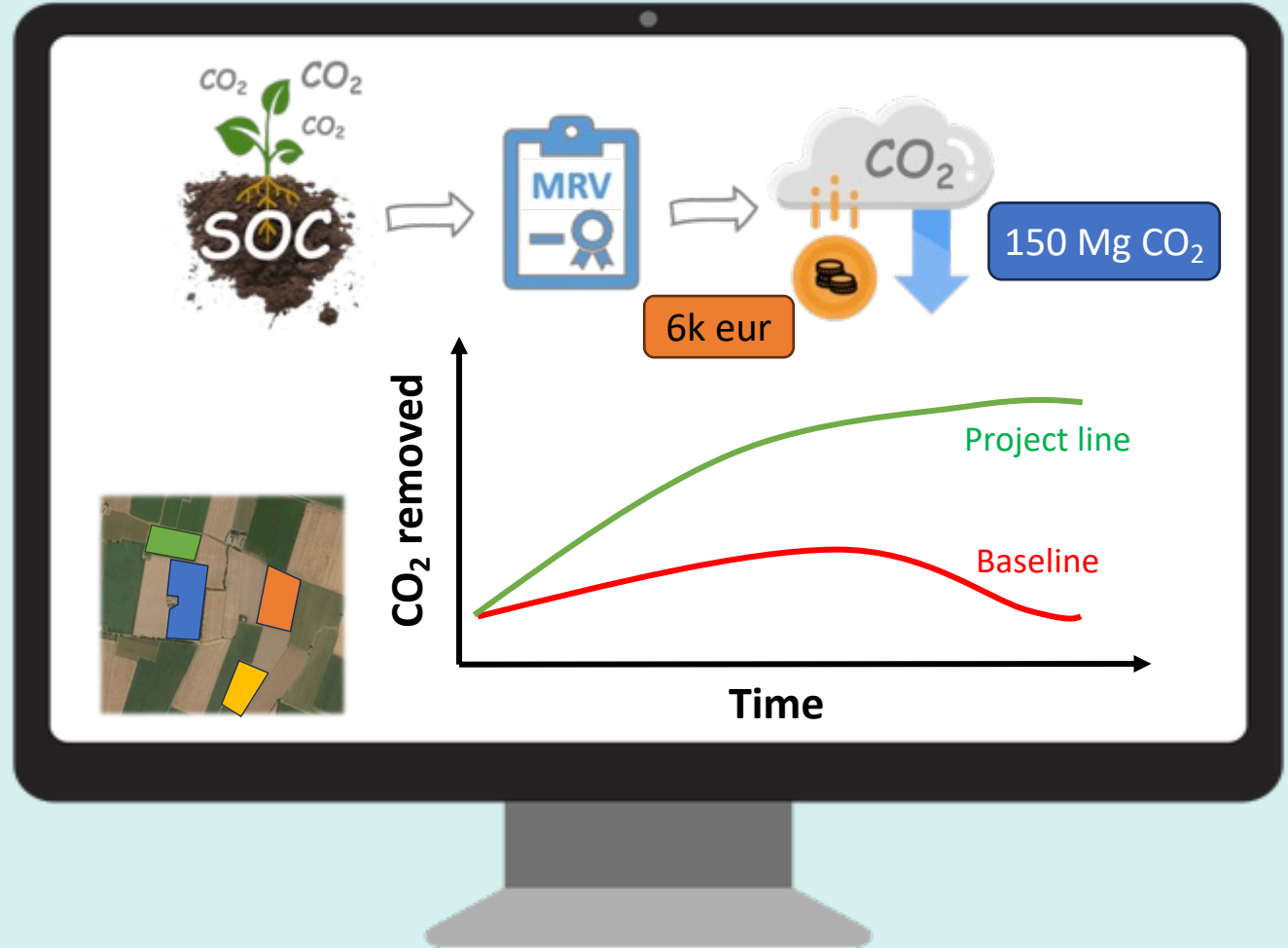


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During Enrollment of Carbon Farmers . . .

If you apply these practices, your estimated carbon removals . . .

Which is the soil health cost? What are the benefits for these practices? Obtain from adopting these practices?



Paragraph 17 of the CRCF

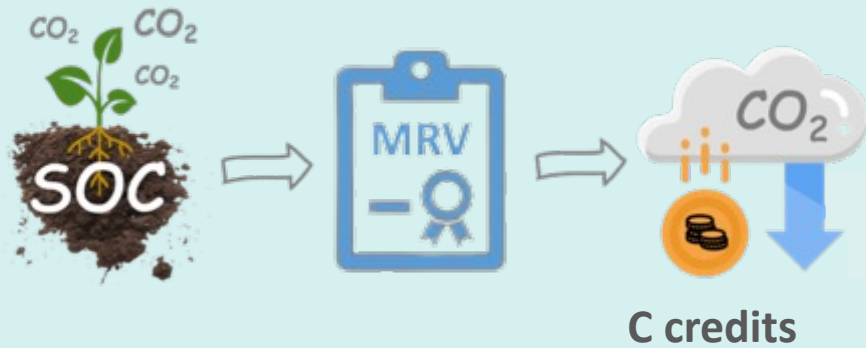
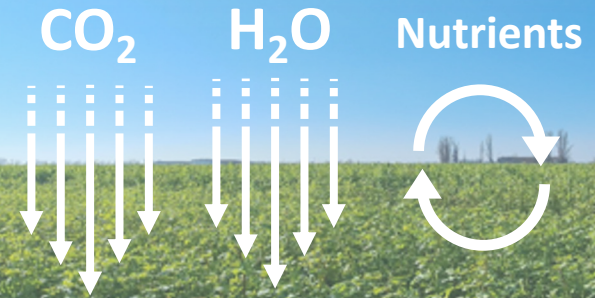
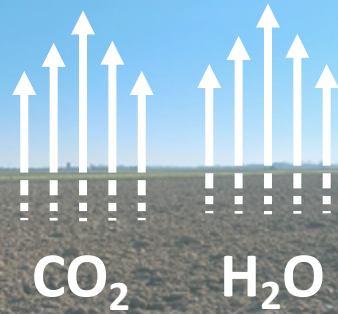
Operators or groups of operators may report co-benefits that contribute to the sustainability objectives beyond the minimum sustainability requirements.

*To this end, **their reporting SHOULD COMPLY with the certification methodologies tailored to the different carbon removal activities**, developed by the Commission.*

*Certification methodologies should, as much as possible, **INCENTIVIZE the generation of co-benefits for BIODIVERSITY** going beyond the minimum sustainability requirements.*

These additional co-benefits will give more economic value to the certified carbon removals and will result in higher revenues for the operators.

The other side of the coin of *Carbonfarmingdoneright*



Every ton of CO₂ removed

=





Why is this FG of interest ?



Most of the economic value of SOC sequestration is climate mitigation or we can go beyond by valuing also its agronomic benefits?



A Blueprint (aka an **accounting framework**) with which practitioners and stakeholders can understand

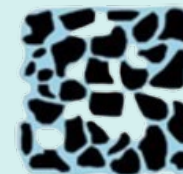
HOW TO CALCULATE the economic value of **agronomical** hidden **on-farm SOM** co-benefits



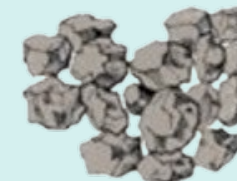
SOM marginal value
(€ Mg C ha⁻¹ y⁻¹)



Increased nutrient cycling as fertilizers replacement value



PAWC as estimated yield improvement



Better soil structure as reduced fuel consumption

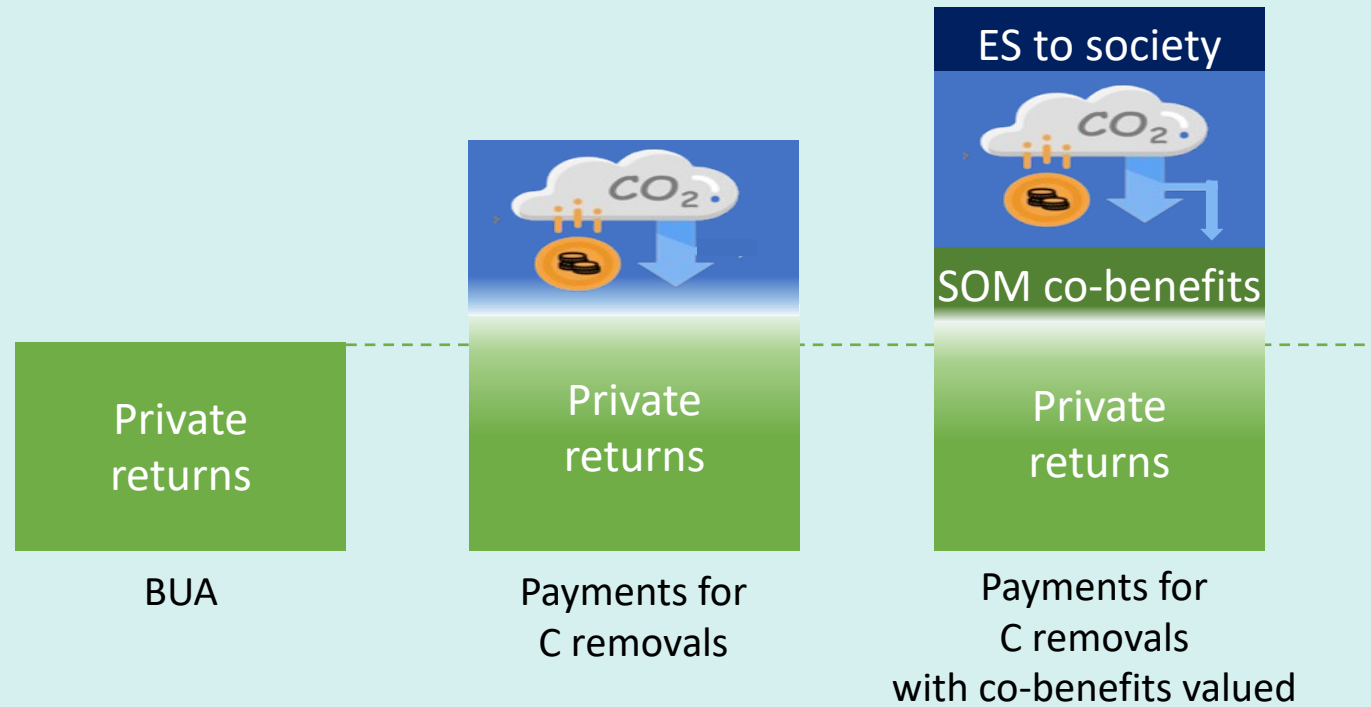


Above and/or belowground biodiversity as ???



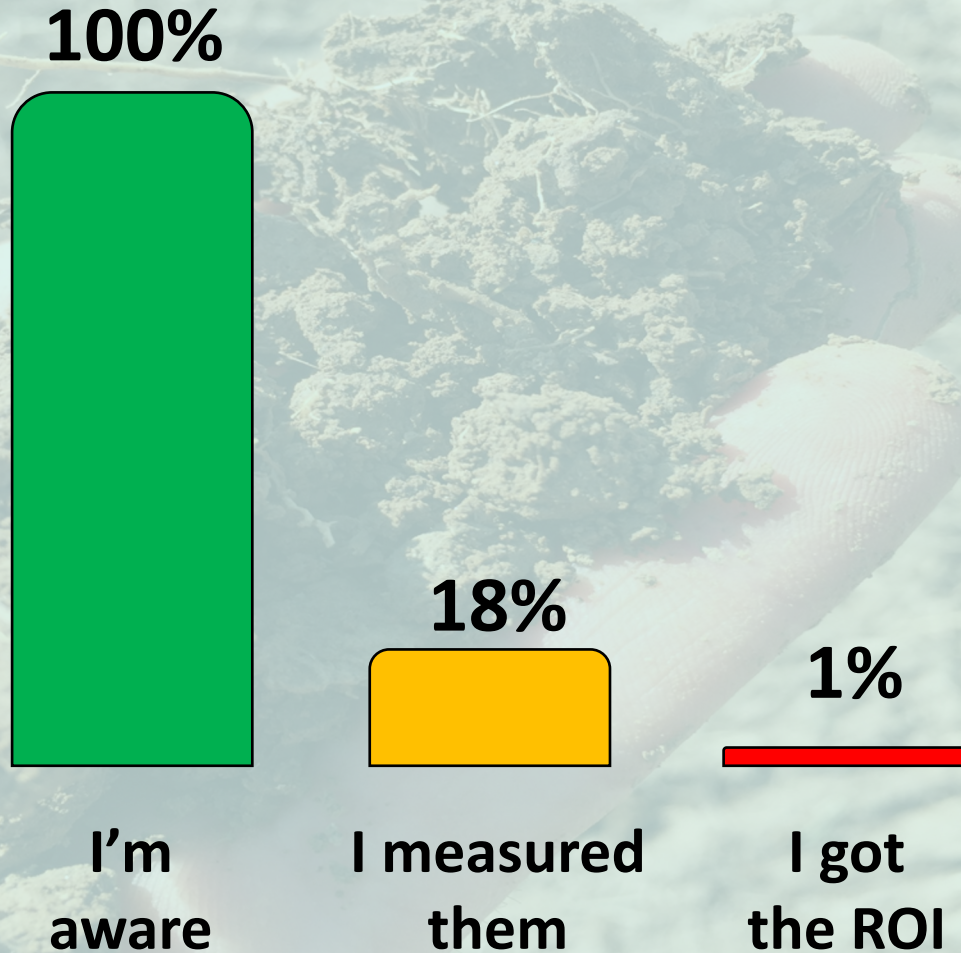
Valuing co-benefits

No two ag food supply chains are the same . . .



Adapted from Collins *et al.* (2022)

Academia



FACING A DILEMMA

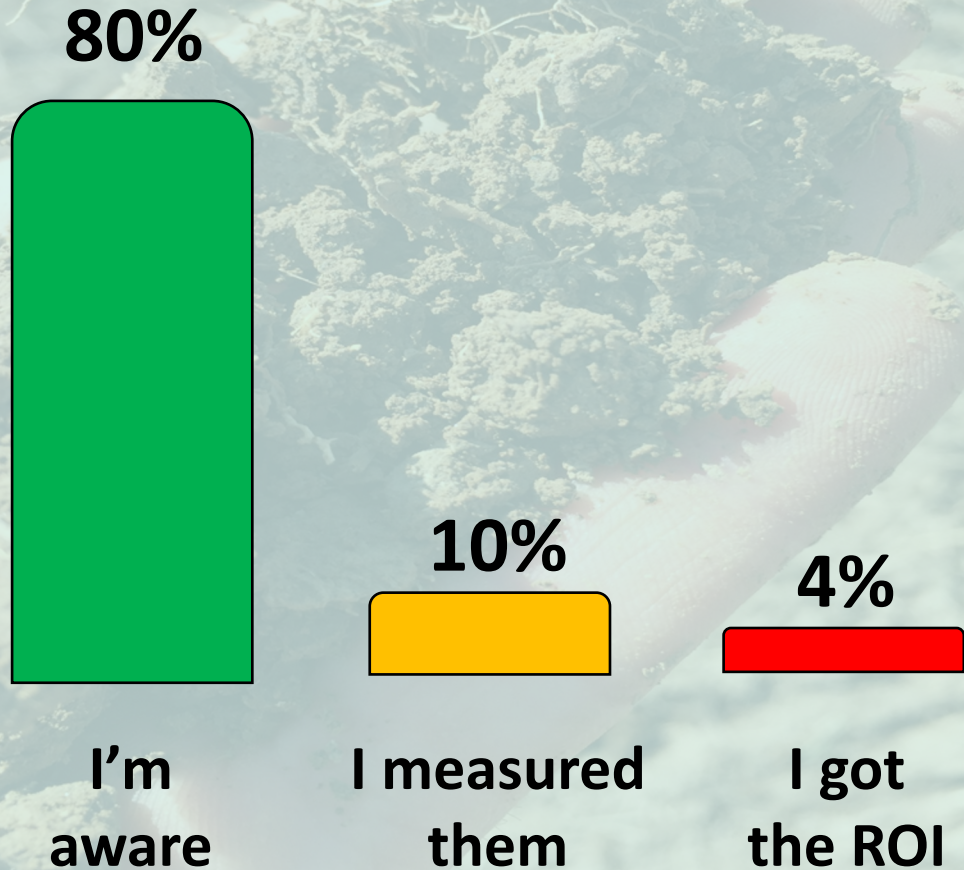
*The soil carbon dilemma:
Shall we hoard it or use it?*

Janzen, 2006

*The SOM co-benefits dilemma...
everybody mention them but nobody
measure them*

FG1.2, 2024

Ag food industry



FACING A DILEMMA

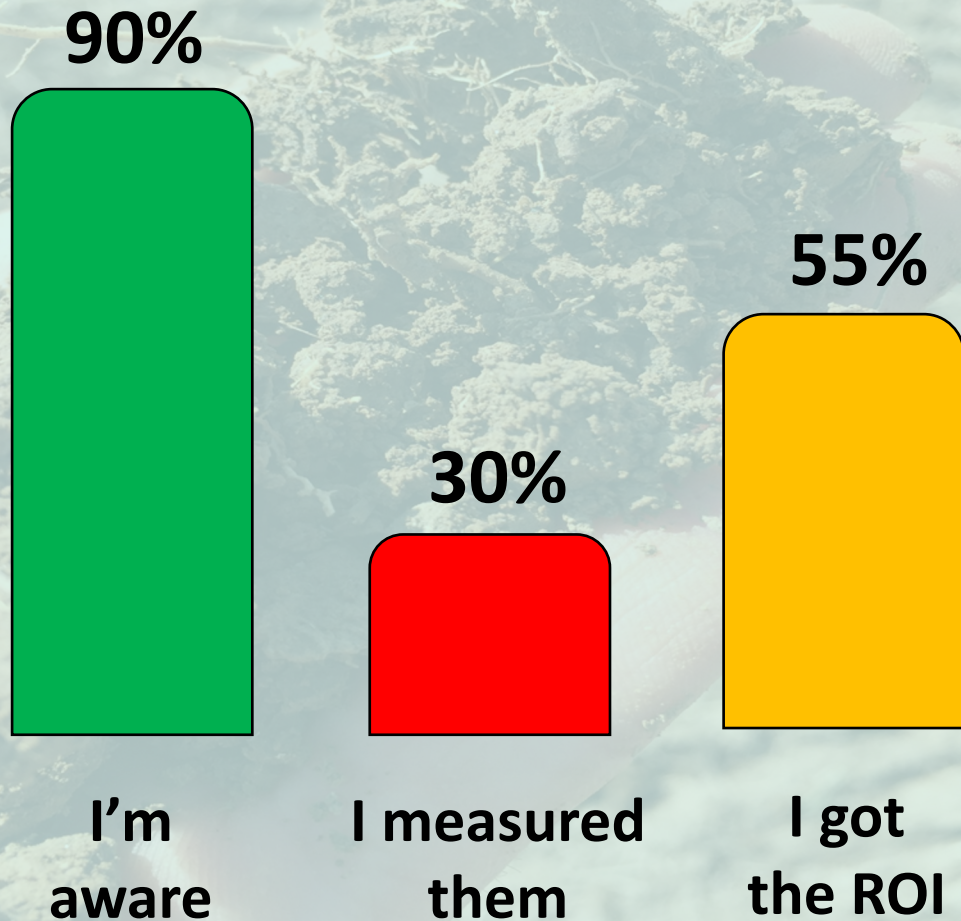
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Farmers/advisors



FACING A DILEMMA

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FG1.2, 2024

CF program developer



I'm
aware

I measured
it

I got
the ROI

FACING A DILEMMA

*The soil carbon dilemma:
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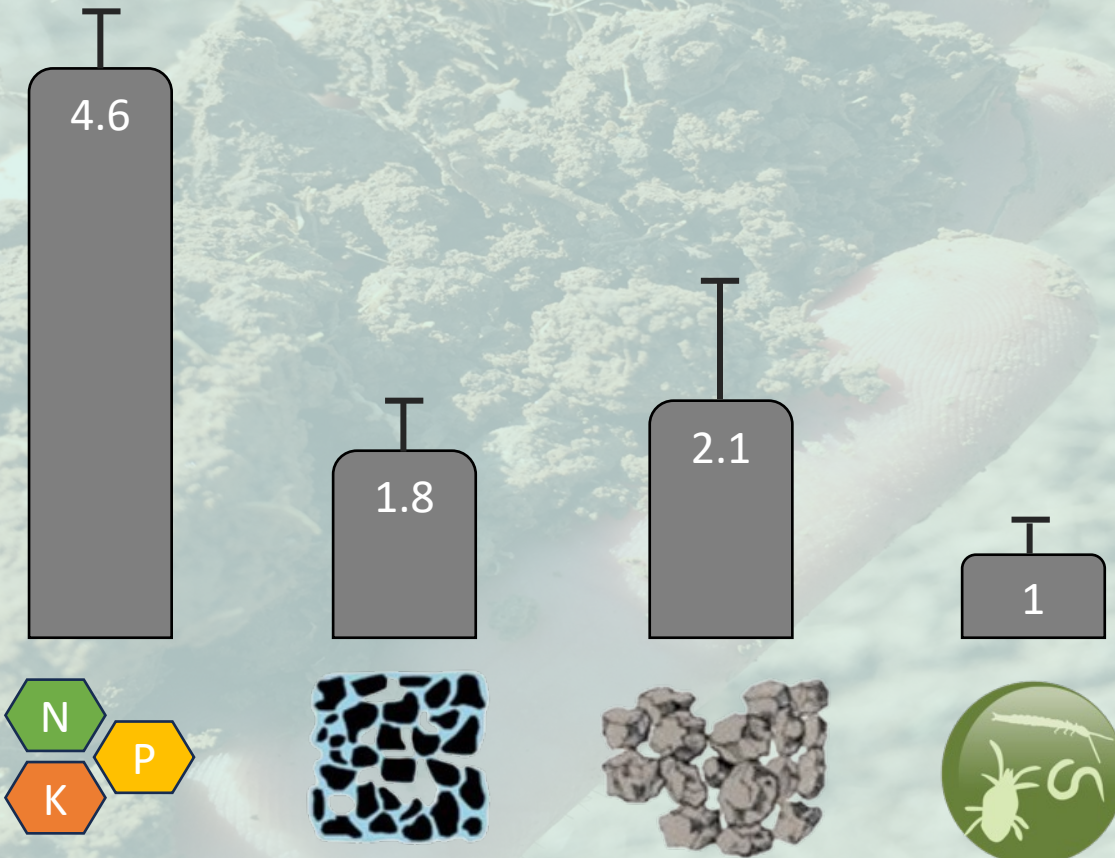
Janzen, 2006

*The SOM co-benefits dilemma...
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FG1.2, 2024

Who is the game-changer for ROI on the **short-term**?

Ranking 1-5



Figuring out soil health ROI

No two farms are the same ...

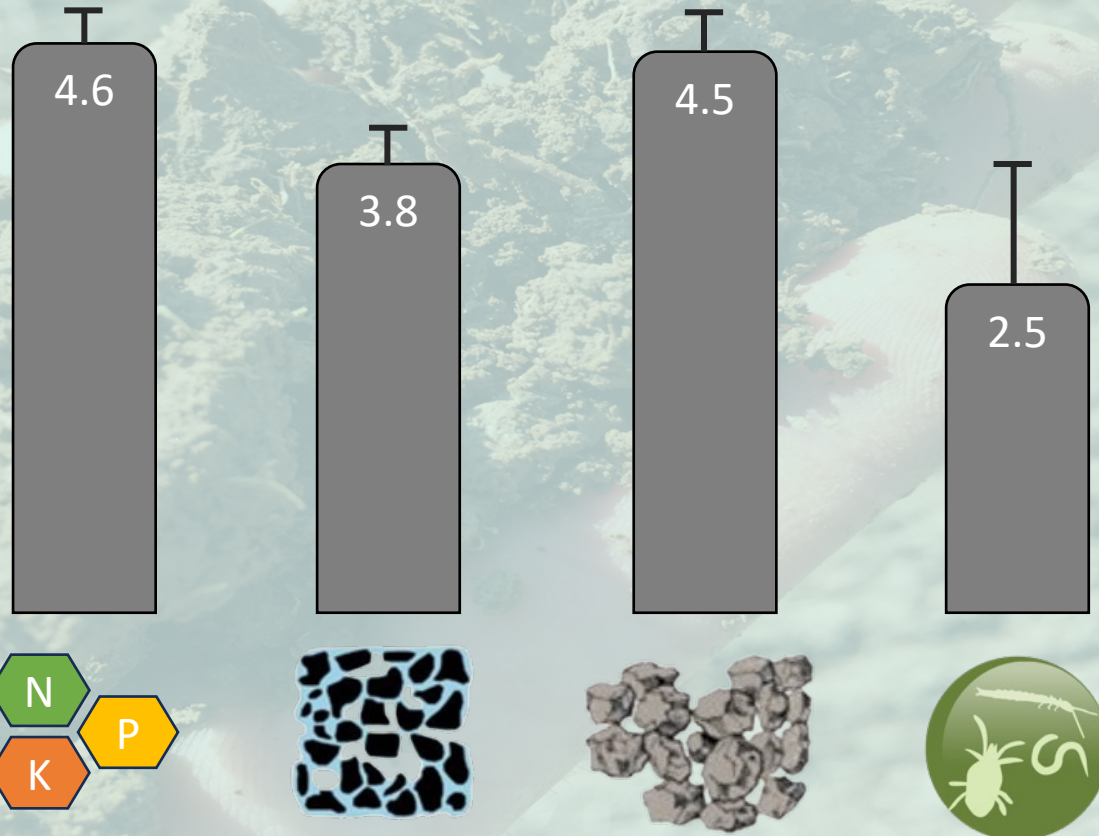
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Janzen, 2006

Who is the game-changer for ROI on the long-term?

ROI on the **long-term**?

Ranking 1-5

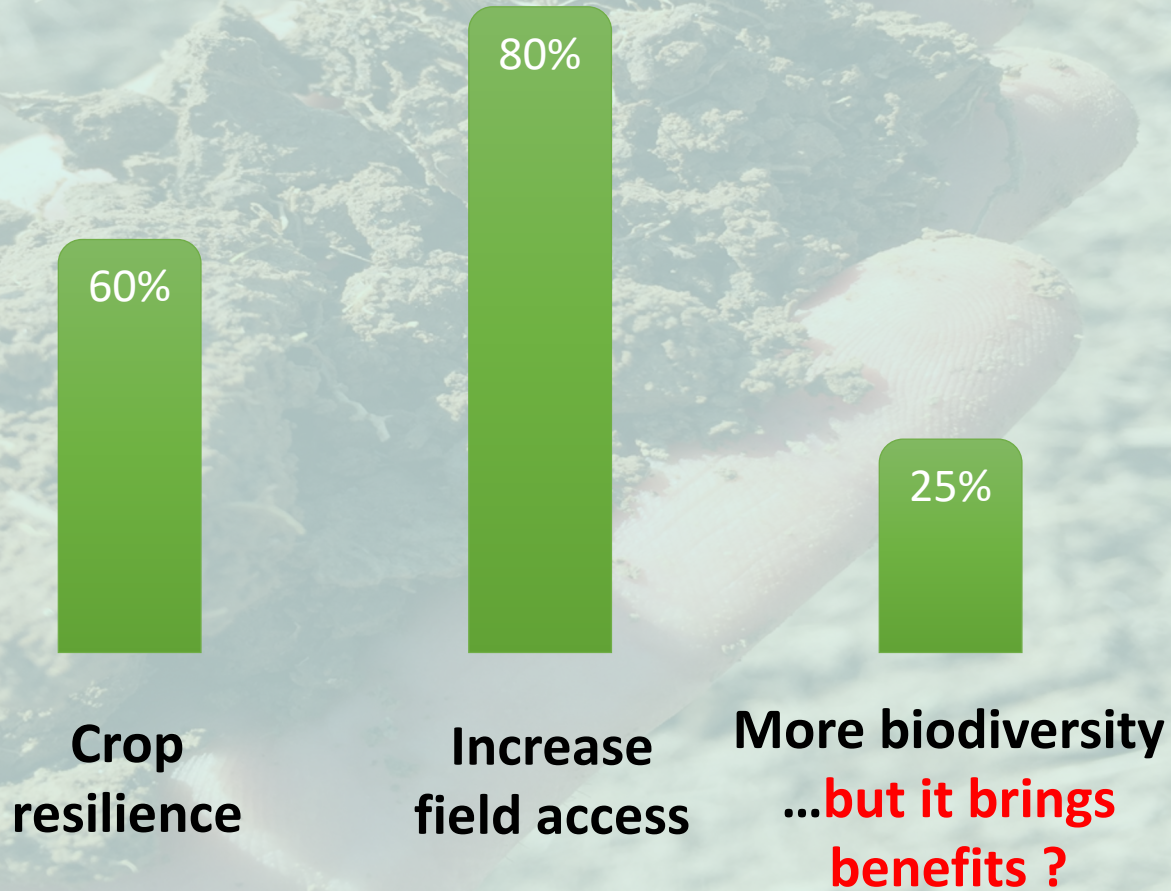


«Soil health makes sense, but does it make money?»

Keith Berns, 2023



Which other co-benefits you have experienced?



The FG roadmap

- 1 FG first memberships + Survey + mapping of skills/expertise and data available
- 2 State of-the-art review on co-benefits
- 3 New FG members + agree upon models/ approaches to use for valuing
- 4 2nd EU Carbon Farming summit -> First draft of accounting framework
- 5 Validation test for CF cropping systems (T1.1) and AF update/revision
- 6 3rd EU Carbon Farming summit -> final AF with recommendations to DG CLIMA



A shared and validated accounting framework for estimating economic value of SOM value connected to CF

First take home messages from FG

We need to

- **AGREE UPON MORE** the terminology (which are the SOM co-benefits?) and on analytical methods (how to (M)MRV them ?) in order to be compliant with CRCF methodologies. More link with **soil health law** ?
- **IDENTIFY** and **REPORT** only for those that bring **REAL** and **MEASURABLE** long-term benefits to the soil, water and nutrient use, and farmers' pocketbooks
- **TRACK DOWN** more **on-farm experiences** and **approaches to valuing** to share
- **ADDRESS** the **private_vs societal value issue** when a CF project generates co-benefits
- **FIGURE OUT** soil health ROI with CF... dealing with **TEC (Total Economic Value)**: use vs non-use value, direct vs indirect use

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THANK YOU



UCSC Field Crops Group

