



# Field visit Praktijkpunt Landbouw Vlaams-Brabant



EIP-AGRI brokerage event  
'Get involved in the EU Mission: A Soil Deal for Europe'



## VISIT 8TH OF JUNE, SOIL NETWORK EVENT - NOTES

PROJECT 1
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### SLIDE 1

Project Title:

Smart decisions in cultivation and technology for a profitable and resilient agriculture

WP: Sustainable cultivation through better soil management - **Good soil management and optimised irrigation**

Task: Type of spring soil labour related to soil moisture = reducing water loss from soil

With well thought-out soil management, the grower can better retain and use the soil moisture.

The aim of this task is to visualize the effect of various spring activities on available soil moisture during cultivation.

Screening of the homogeneity of the field, reliable results

- 1) penetration resistance
- 2) Soil map Database subsurface Flanders (2 types of sandy loam)
- 3) Soil scan registers heterogeneity based on measuring the EC = electrical conductivity

### SLIDE 2

After winter, a cover crop of yellow mustard and rapeseed was on the field. It was minimised. After that, slurry manure was injected. The 4<sup>th</sup> of May, 5 different types of soil labour were performed and the 5<sup>th</sup> of May, the field was sown with corn.

Parameters we follow are:

- Counting germination and crop status
- Counting weed
- Soil moisture by calibrated TDR sensors
  - o At first: 0-15 cm
  - o End of May: 0-30 cm
- Yield differences at harvest

### SLIDE 3

Shows the different types of soil labour

- 1) Ploughing, rotavator
- 2) Non-inversion labour with cultivator at 10 cm, rotavator
- 3) Spading
- 4) Non-inversion labour with cultivator at 10 cm followed by a cultivator at 35 cm, rotavator
- 5) Non-inversion labour with cultivator at 10 cm, no rotavator

### SLIDE 4

First results

- Crop stage and weeds: few differences
- Moisture condition ploughed and spaded object: noticeably drier (% moisture), more air in between the soil particles, more evaporations (very dry period this spring)

## PROJECT 2

### SLIDE 5

Building on carbon storage using circular material for a better soil  
Different types of materials that were tested in this project

- Farmyard/fixed manure
- Compost from green waste
- Compost from municipalities
- Wood chips
- Wood chip sieve
- Shredded roots
- Miscanthus
- Shredded pruning wood

Dosage: restriction of the manure legislation for compost and fixed manure, otherwise practical dosage

### SLIDE 6

Composition and content of the different materials

Of importance is the ratio Carbon over Nitrogen, indication of possible N-immobilisation in the soil

### SLIDE 7-8-9-10

Products

Field trials – strip trial

### SLIDE 11

Impact on cover crops

Mixture of non-leguminous green cover sown after winter barley

Visually less good emergence in the objects miscanthus and shredded pruning wood (photos 15/10/22)

### SLIDE 12

In a similar field trial, we also noticed an impact of the woody materials on the cover crop. Then the effect was similar for miscanthus and for wood chips. In this field, the wood chips did as well as the object with fixed manure.

### SLIDE 13

Impact on the main crop

We see one object that is behind, it is the miscanthus.

In the other years and on the other fields with similar results, no such impact on the main crop was viewed.

## PROJECT 3: Long-term field trials of reduced tillage versus ploughing

### SLIDE 14

- 7 farmers cooperating in this project
- Objects:
  - Ploughing
  - Non-inversion labour at 10 to 15 cm deep
  - Non-inversion labour at 30 cm deep
- 4 of the 7 plots > 15 years split up
- Oldest test field: since 1998

Succeeded by BDB and province of Flemish Brabant

- effect on soil properties
- effect on yield

### SLIDE 15

Reduced tillage: advantages

- Proven effective against erosion (thanks to crop residues and increase %C top layer)
- Not more organic matter, but a redistribution (but not pronounced everywhere).
- Better capillary ascent, better deep infiltration (?) – avoid a compacted layer because of ploughing

### SLIDE 16

Reduced tillage: disadvantages

- With plowing you can better control the weeds
- Is your field too bad? Ploughing necessary to be able to sow.
- Wait longer in spring (wetter + colder)
- Crop residues sometimes a problem for emergence and disease pressure
- In the longer term sometimes problems with compaction

Conclusion: farmer's know how of what technique is suitable in what conditions stands above a general conclusion that the one or the other technique is best

## Contact information

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**Mieke Vandermersch**  
Onderzoeker

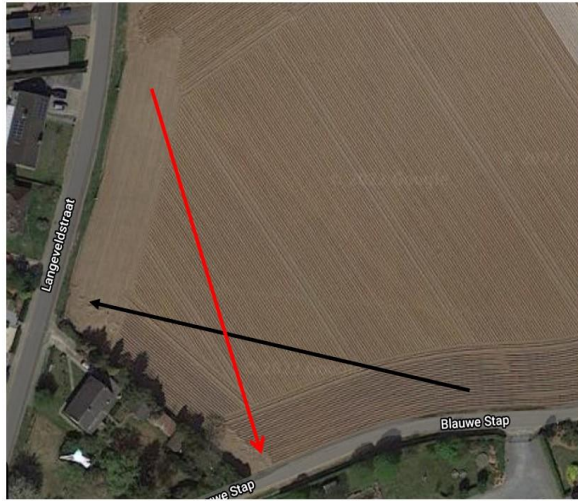
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VLAAMS-BRABANT**

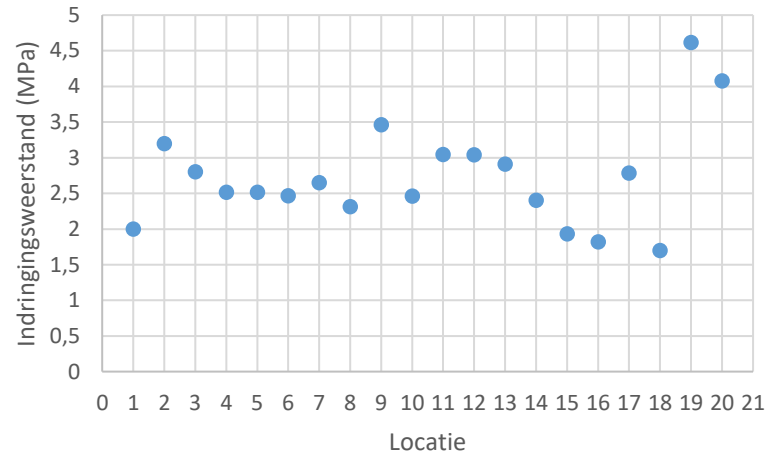
[www.praktijkpuntlandbouw.be](http://www.praktijkpuntlandbouw.be)  
[www.twitter.com/praktijkpunt](https://www.twitter.com/praktijkpunt)



Metingen 1 tem 10

Metingen 11 tem 20

Indringingsweerstand

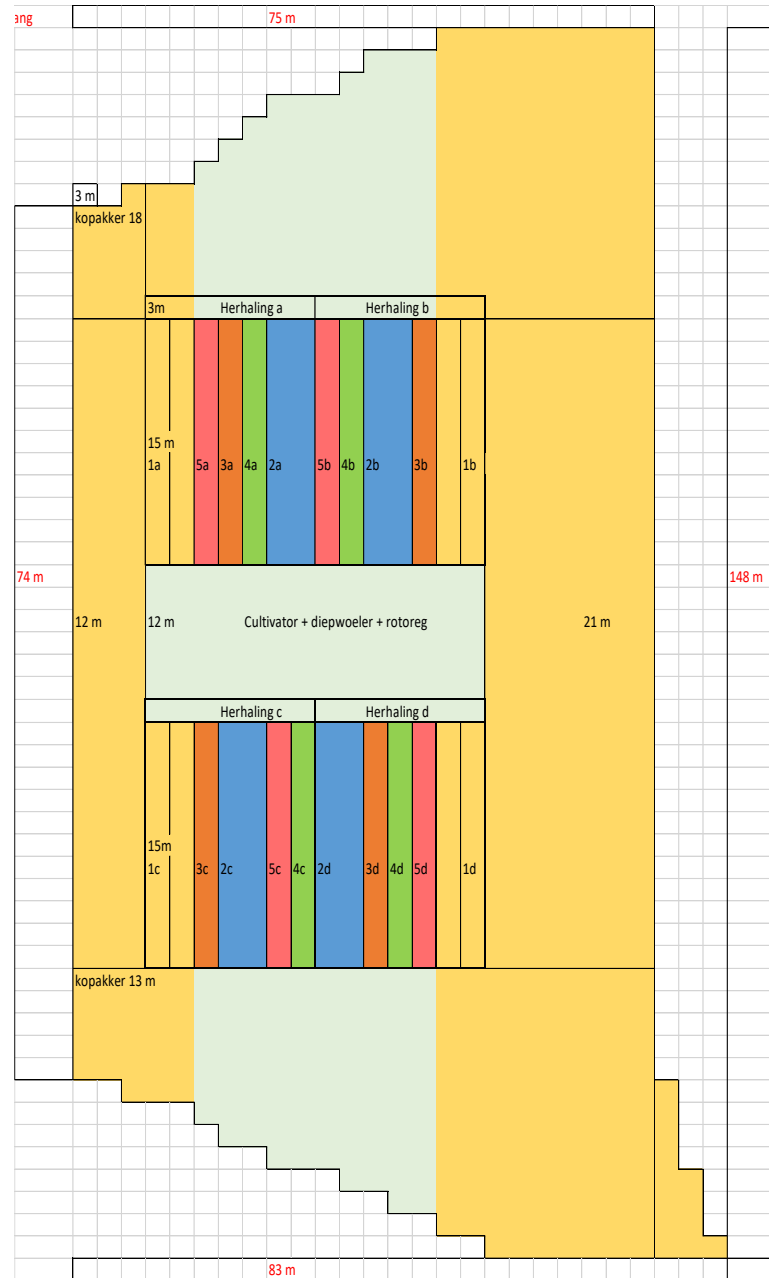


**Project Title: Smart decisions in cultivation and technology for a profitable and resilient agriculture**

**WP: Good soil management and optimised irrigation**

**Task: Type of spring soil labour related to soil moisture**





### Basisbewerking:

- Klepelen groenbedekker (gele mosterd en raapzaad)
- Injectie drijfmest
- Bodembewerking 4/5/'22
- Zaai 5/5/'22

### Parameters:

- Opkomststelling
- Onkruidtelling
- Bodemvocht (TDR sensoren, gekalibreerd)
  - 0-15 cm
  - Eind mei: 0-30 cm
- Proefoogst



Ploegen

Ondiepe NKG met rotoreg

Spitten

Diepe NKG Diepwoeler

Ondiepe NKG zonder rotoreg



## Eerste resultaten:

- Gewasstadium en onkruid : weinig verschillen
- Vochttoestand geploegde en gespitte object: merkelijk droger (% vocht)

	ploegen	spitten	ondiep NKG (cultivator)	ondiep NKG (cultivator)	diepe NKG (diepwoeler)
12/mei		13,9	19,6	24,2	20,1
	11,1	11,6	16,9	13,8	16,9
	16,8	15	18,1	16,7	16,1
	14,7	12,6	21,1	18,5	18,6
20/mei		16,5	25,9	25,1	23,8
	15,3	15,9	24,6	23,7	22,5
	16,5	15,8	21,7	22,1	21,1
	13,3	17,2	26,9	27,4	18,4
3/jun		16,5	26,3	25,7	22,5
	15,1	16,7	25,2	24,8	20,8
	17,2	16,1	25,2	20,7	20,6
	13,1	17,5	24,2	25,1	21,4



Project Title: **Building on carbon storage using circular material for a better soil**

Product	Dosering (ton/ha)	Praktijkpunt	PVL	Boerennatuur
Blanco		X0	X	X
Stalmest	24,0 - 25,8 - 30	XX	(X)	
Groencompost	23,1 - 23,3	XX	(X)	(X)
GFT-compost	23,1 - 23,3	XX	(X)	
Houtsnippers	15,0 - 16,2	XX	X	X
Houtsnipperzeefsel	15,0		X	
Shredderhout	15,0	X0	X	
Miscanthus najaar	15,0 - 16,2	XX	X	
Miscanthus voorjaar	15,0	X0	(X)	
Versnipperd snoeihout	23,0	0X		

(Gehaltes op DS)	Org. Stof	pH	Stikstof (Tot)	P2O5 (g/kg)	K2O (g/kg)	C/N-verhouding	C/P-verhouding	Volumedichtheid (kg/l)
Houtsnippers*	965	5,6	6,4	0,13	4,11	88	4316	0,219
Shredderhout*	923	6,8	3,7	2,1	3,9	145	256	0,123
Houtsnipperzeefsel*	890	6	10,15	1,5	3,9	51	345	0,247
Miscanthusstro* Najaar 2020	968	6,1	4,2	1,9	8,1	134	296	0,098
Miscanthusstro* Voorjaar 2021	961	6,0	2,5	1,5	2,8	223	372	0,107
Runderstalmest**	762		29,5	13,8	36,7	15	32	
Groencompost***	333	8	11,7	4,7	10	17	41	
Gft-compost***	357	8	17,1	8,6	14,3	12	24	
Versnipperd snoeihout*	760	7	7,5	1,77	5,7	59	250	0,319





stalmeest



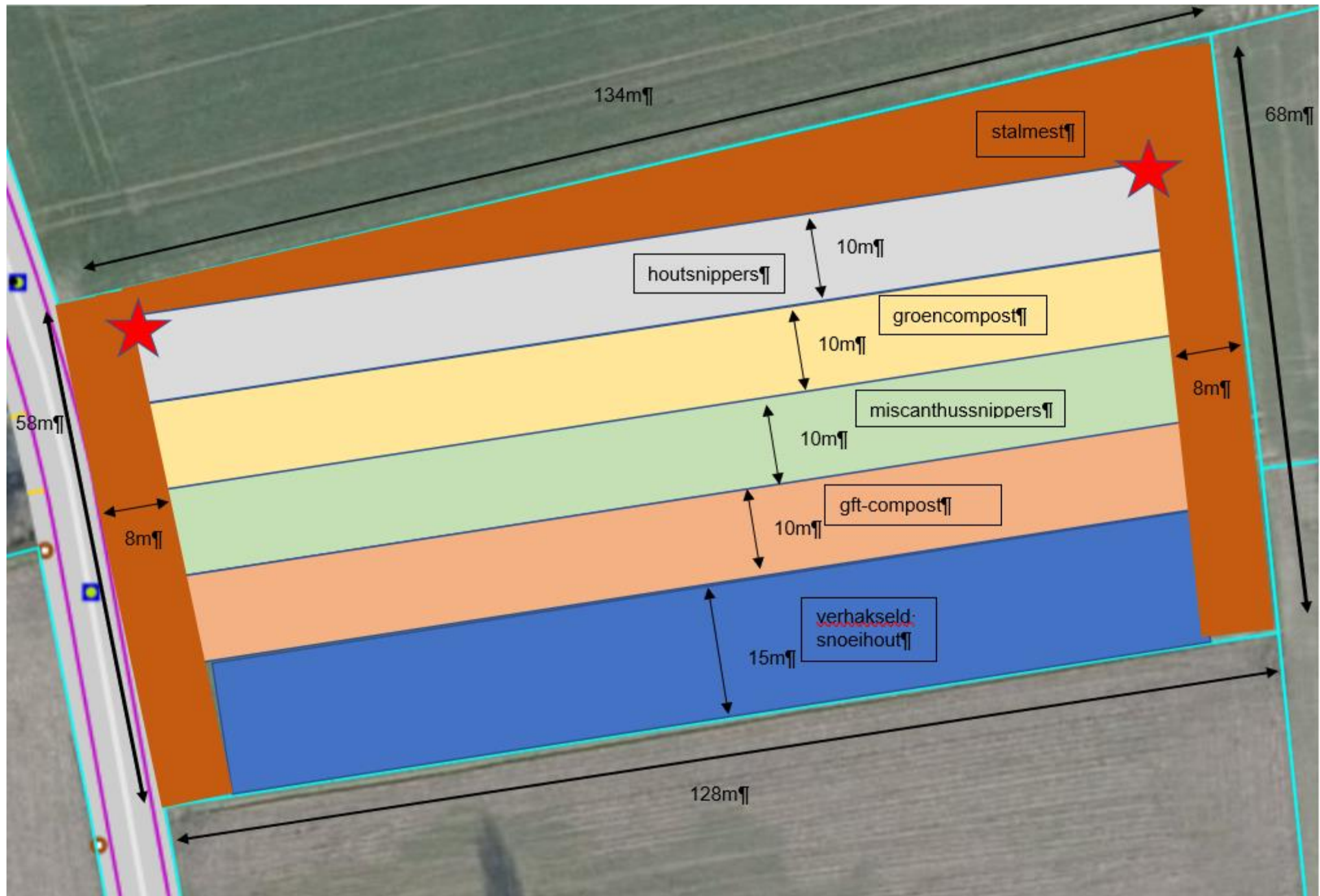


GFT-compost

groencompost



Miscanthus voorjaar



# Impact op vanggewassen 2021

- Mengsel van niet-vlinderbloemige groenbedekker ingezaaid na wintergerst
- Visueel minder goede opkomst in object miscanthus en versnipperd snoeihout (foto's 15/10/'22)



22

Stalmest



21

Hout-  
snippers



20

Groen-  
compost



19

Miscanthus-  
snippers



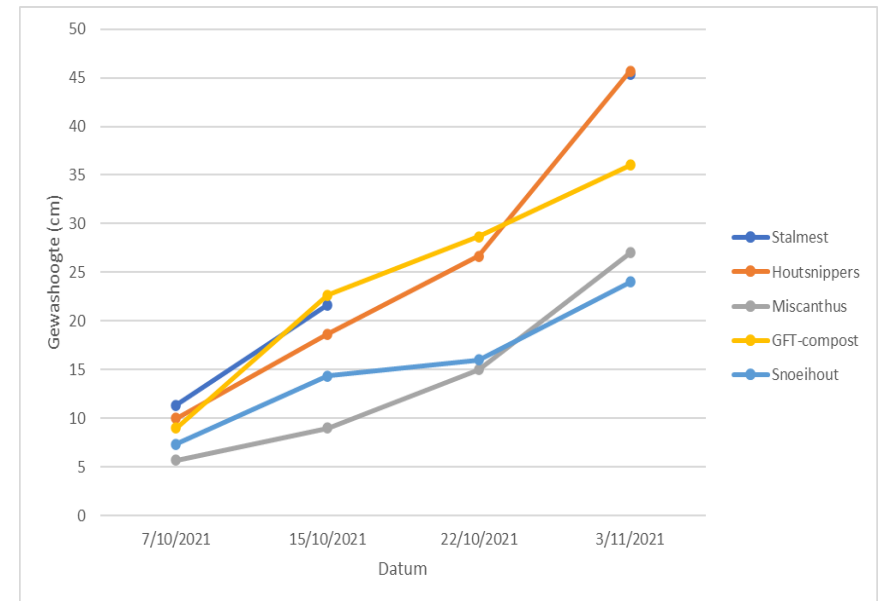
18

GFT-  
compost



17

Versnipperd  
snoeihout



## Impact op vanggewassen 2020 (ander perceel)



Rechts houtsnippers, links stalmest



Links miscanthus, rechts stalmest



# Impact op hoofdteelt 2022

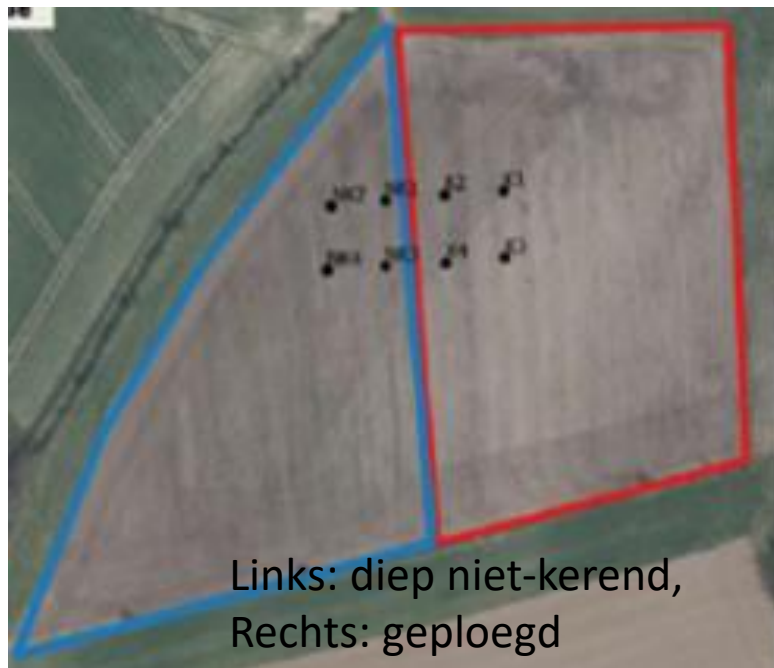
Stalmest



Miscanthus



# Project Title: Long-term field trials of reduced tillage versus ploughing



- 7 proefveldhouders
- Objecten: Ploegen vs. NKB 15 cm diep vs. NKB 30 cm diep
- 4 van de 7 percelen > 15 jaar opgesplitst
- Oudste proefveld: sinds 1998

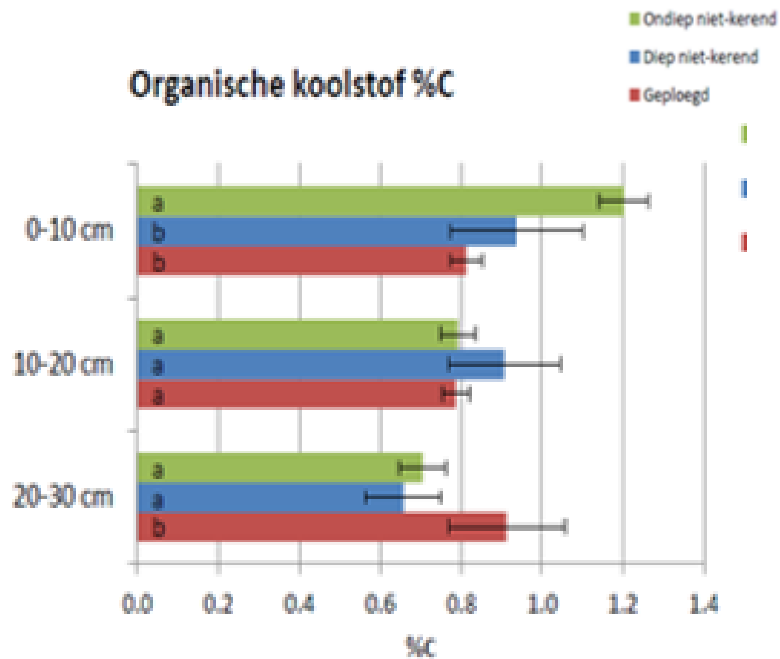
Opgevolgd door BDB en provincie Vlaams-Brabant

- effect op de bodemeigenschappen
- effect op de opbrengst

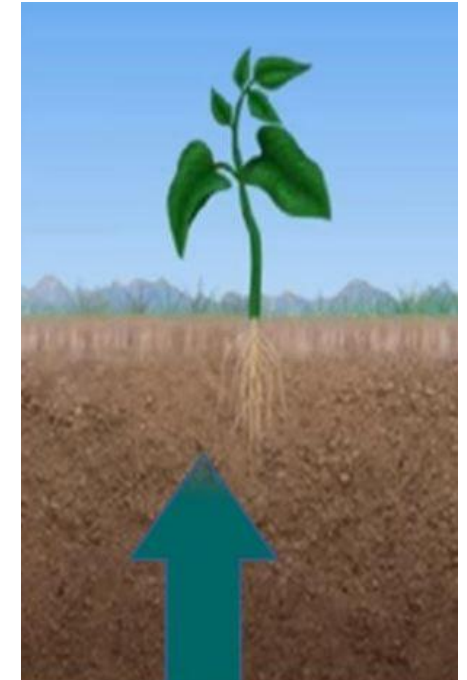
## ⇒ Niet-kerende bodembewerking: voordelen



Bewezen effectief tegen erosie (dankzij  
gewasresten en toename %C toplaag)



Niet méér organische stof, wel een  
herverdeling (maar niet overall  
uitgesproken).



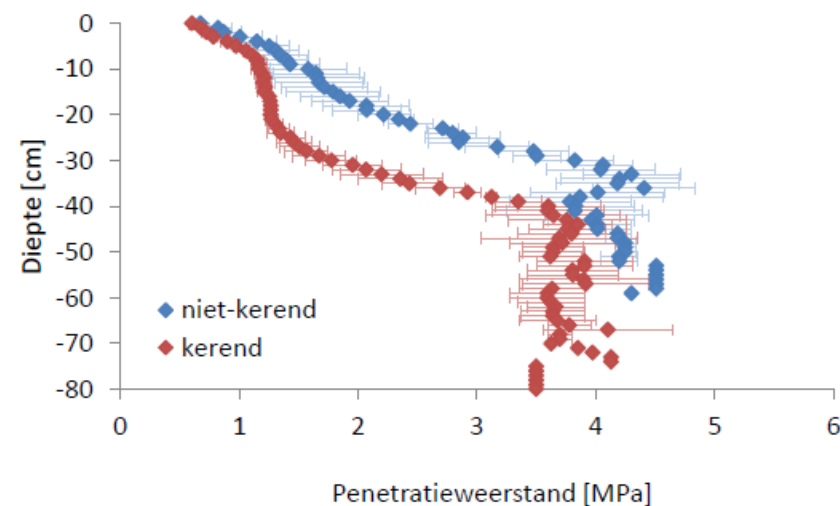
Betere capillaire opstijging, betere  
diepe infiltratie ?

Vermijden ploegzool.

## ⇒ Niet-kerende bodembewerking: nadelen

- Met ploegen kan je beter het onkruid de baas
- Ligt je veld er te slecht bij? Ploegen noodzakelijk om te kunnen inzaaien.
- Langer wachten in het voorjaar (natter + kouder)
- Gewasresten soms probleem voor opkomst en ziektedruk
- Op langere termijn soms problemen met verdichting

kortrijk dorp 30-05

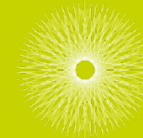


# **EIP-AGRI brokerage event** **'Get involved in the EU Mission:** **A Soil Deal Europe** **8-9 June 2022, Brussels, Belgium**

All information on the brokerage event is available on  
[www.eip-agri.eu](http://www.eip-agri.eu)

on the event webpage:  
<https://ec.europa.eu/eip/agriculture/en/event/eip-agri-brokerage-event-%E2%80%99get-involved-eu-mission>

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