De Virtuele Lysimeter update

Online meeting 05 03 2024

Wim Voogt, Joseph Stoener




WAGENINGEN UNIVERSITY & RESEARCH

TOPSECTOR TUINBOUW & UITGANGSMATERIALEN

Stichting Kennis in je Kas

Glastuinbouw Nederland morgen groeit vandaag

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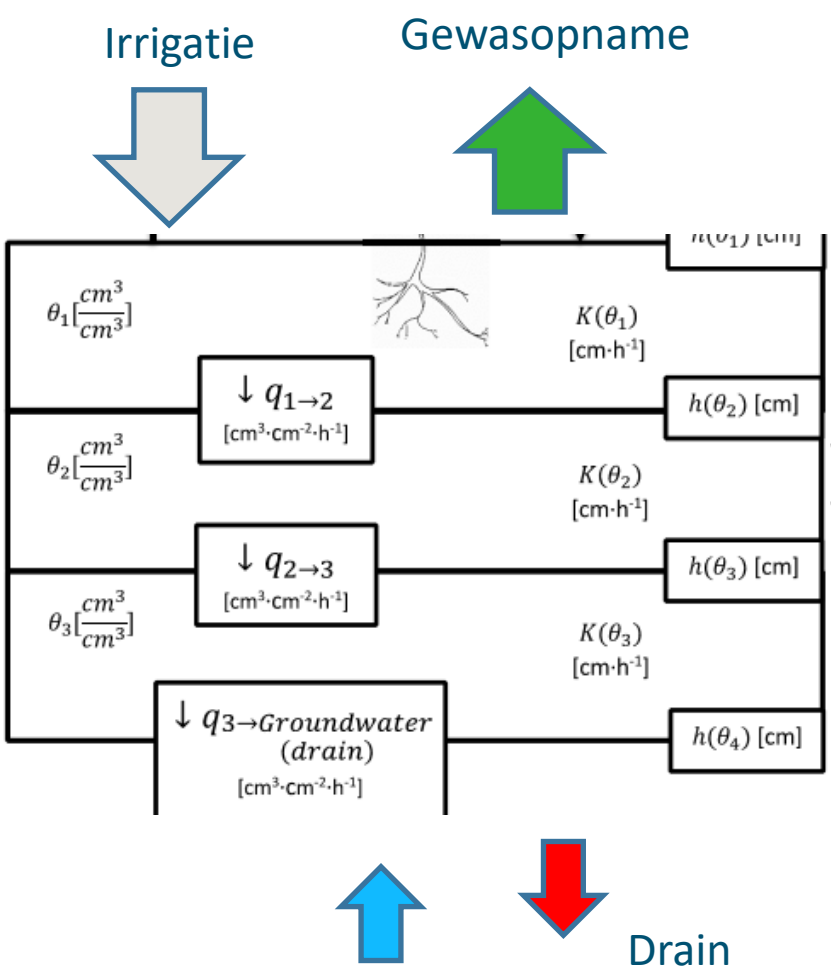
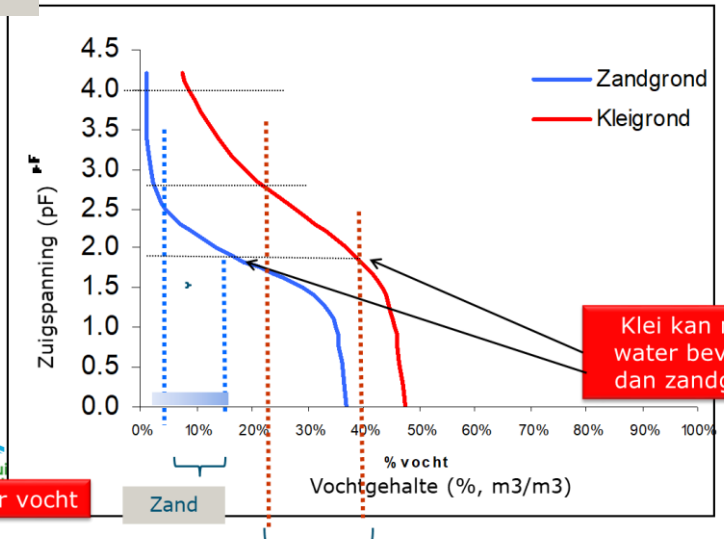
Vereenvoudigd drie-laags bodem-model



Bodemeigenschappen per laag



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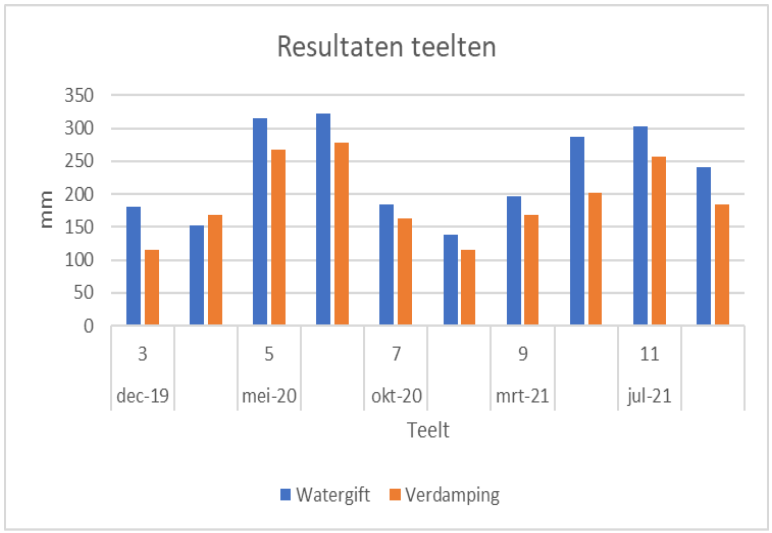
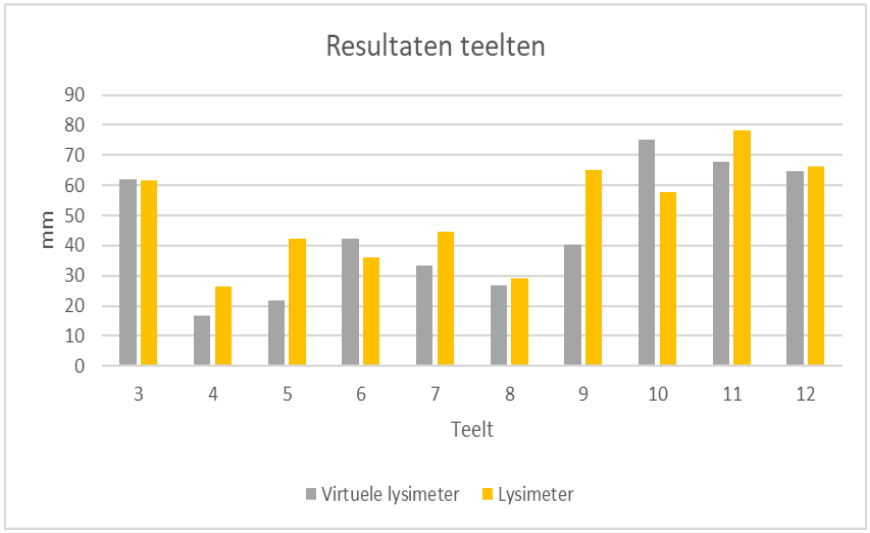
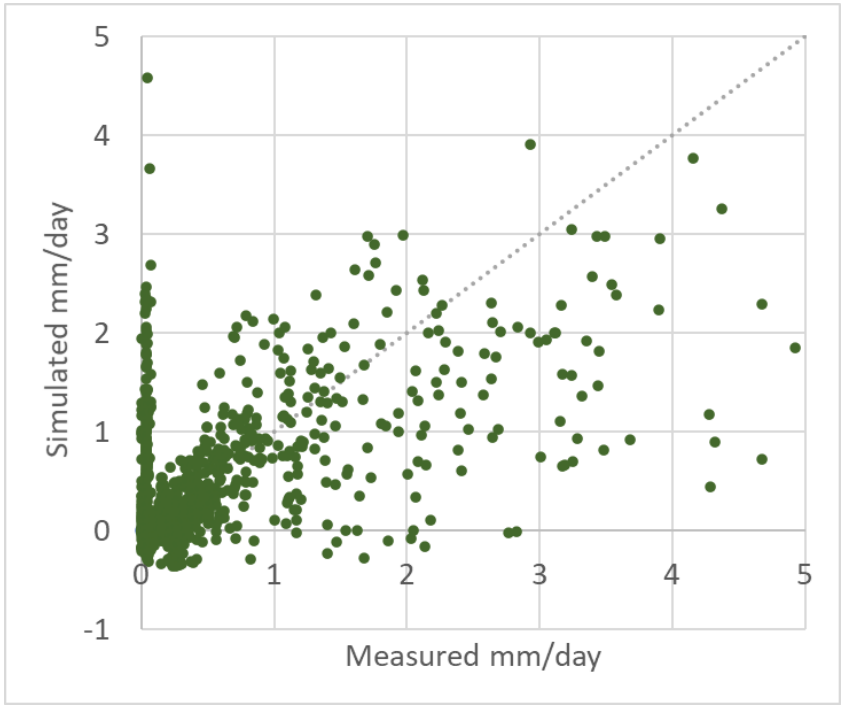
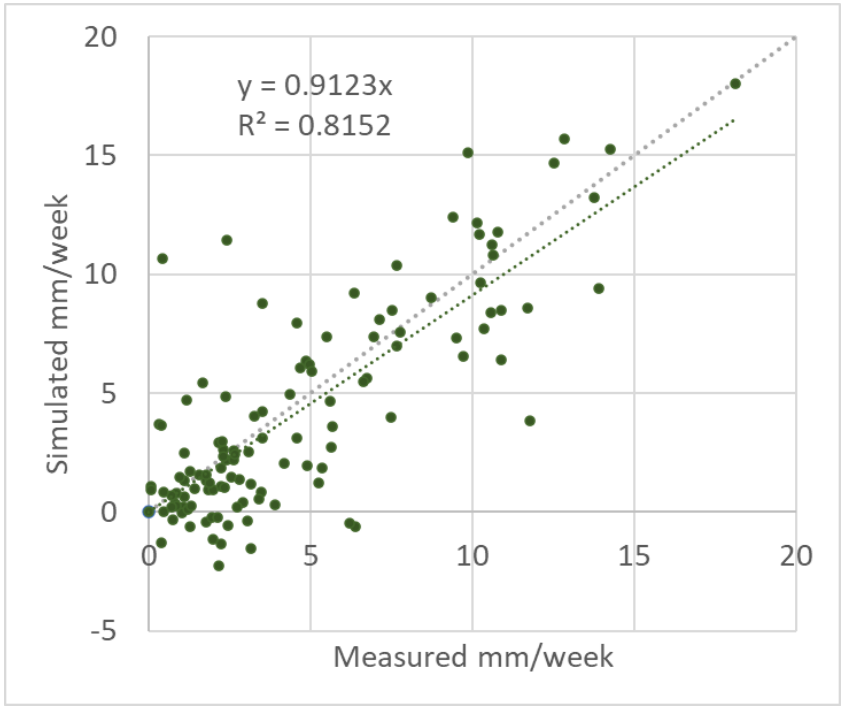

Resultaten teelten
350
300
250
200
150
100
50
0
mm
3
dec-19
5
mei-20
7
okt-20
9
mrt-21
11
jul-21
Teelt
Watergift
Verdamping


Resultaten teelten
90
80
70
60
50
40
30
20
10
0
mm
3
4
5
6
7
8
9
10
11
12
Teelt
Virtuele lysimeter
Lysimeter

Vergelijking VL met L

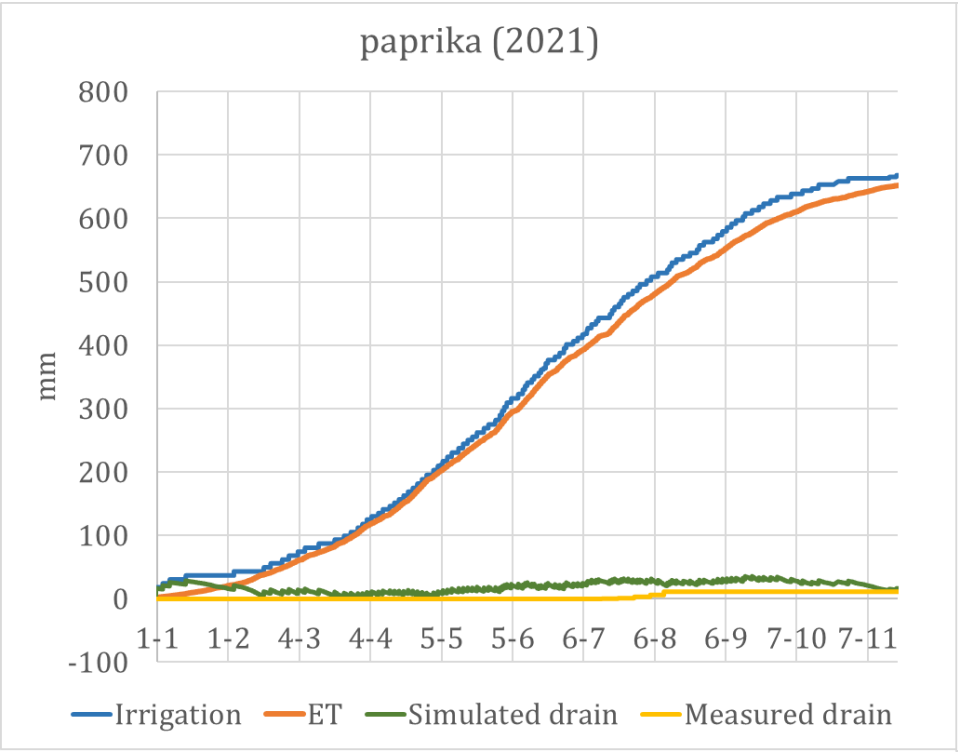


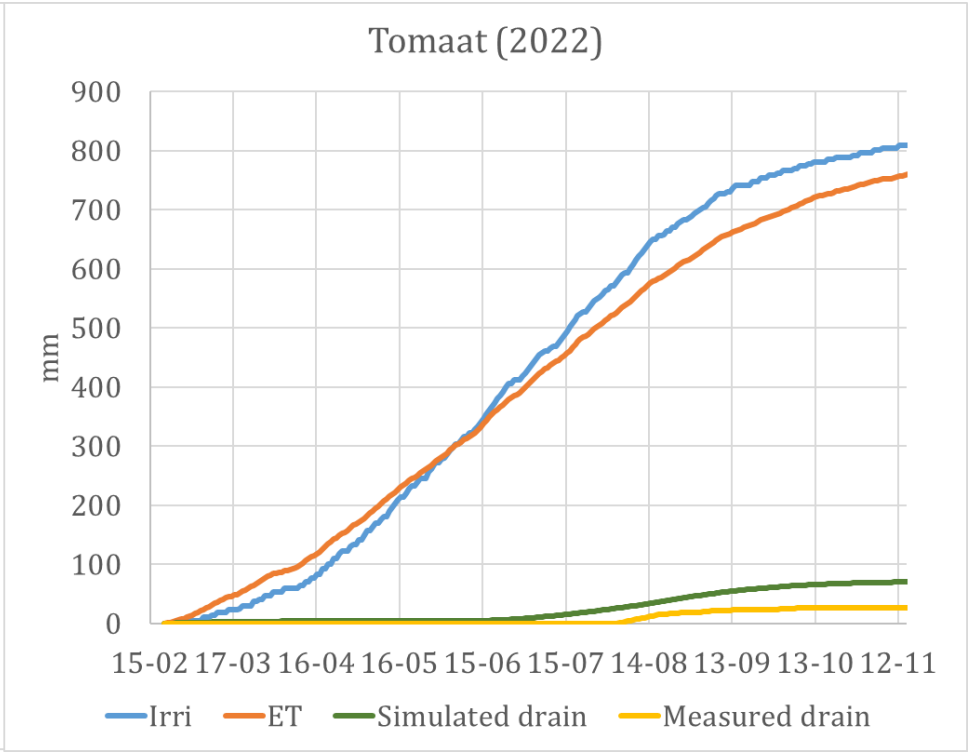


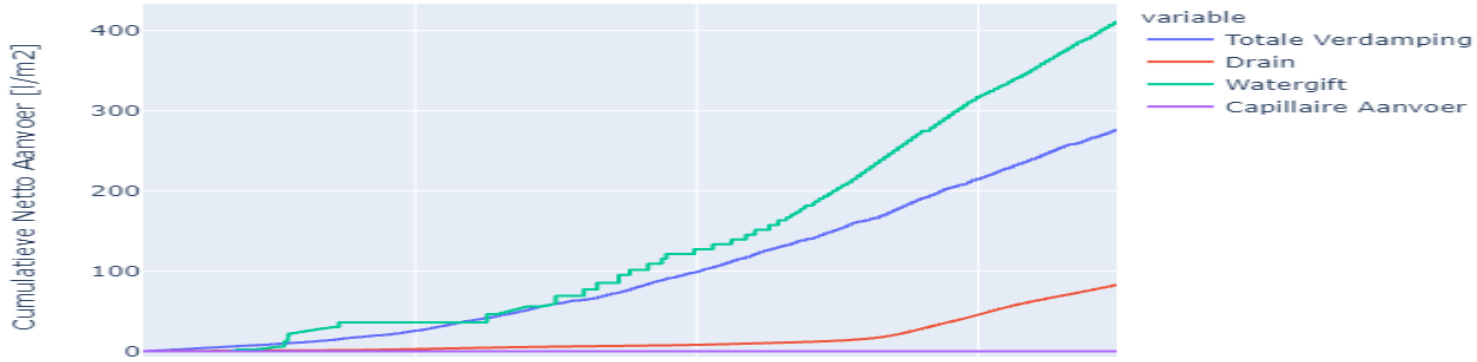
Dagelijks

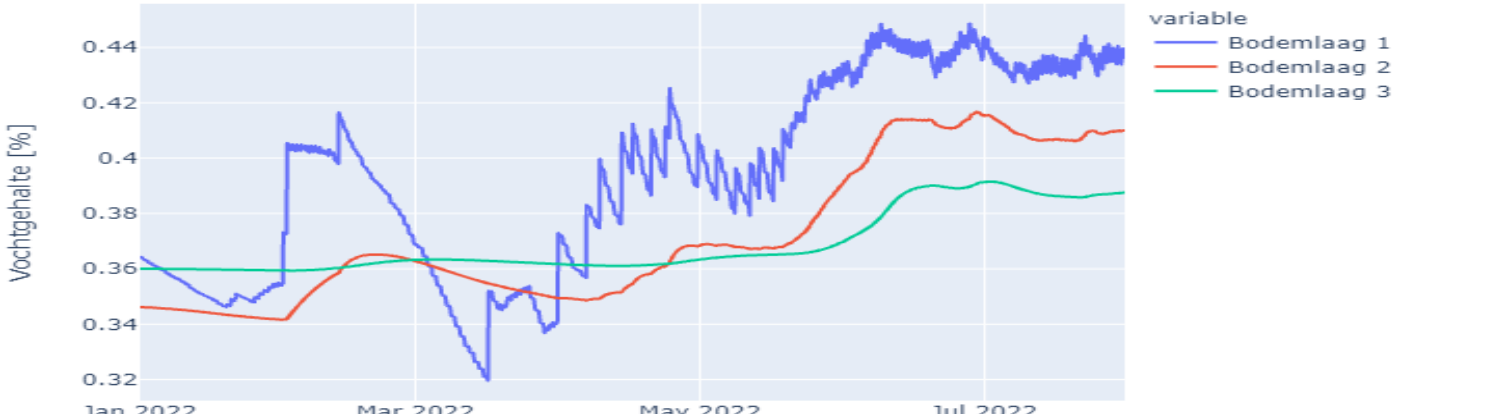
Wekelijks

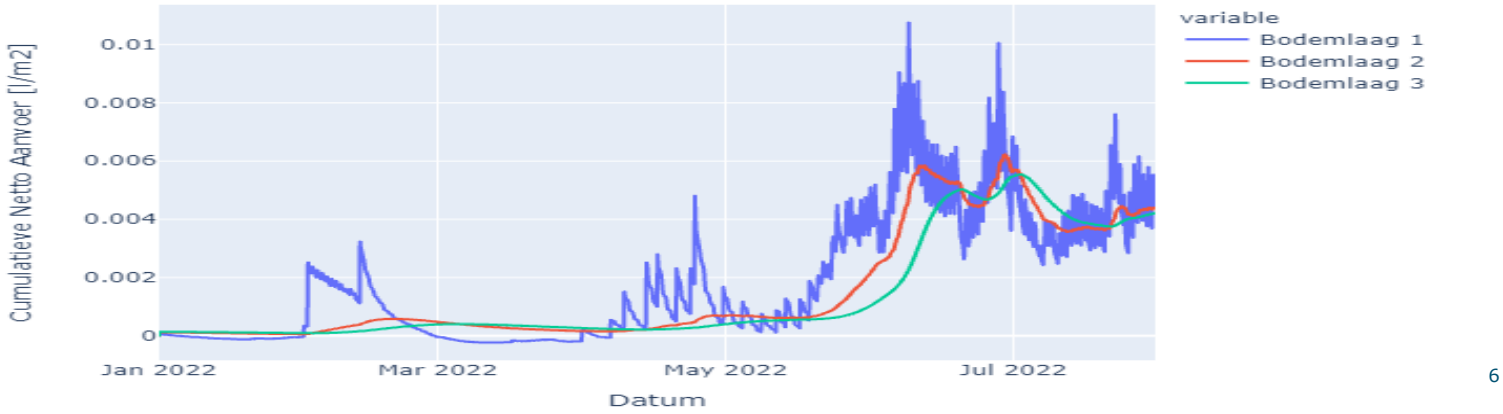
- Bioteelt, Velden











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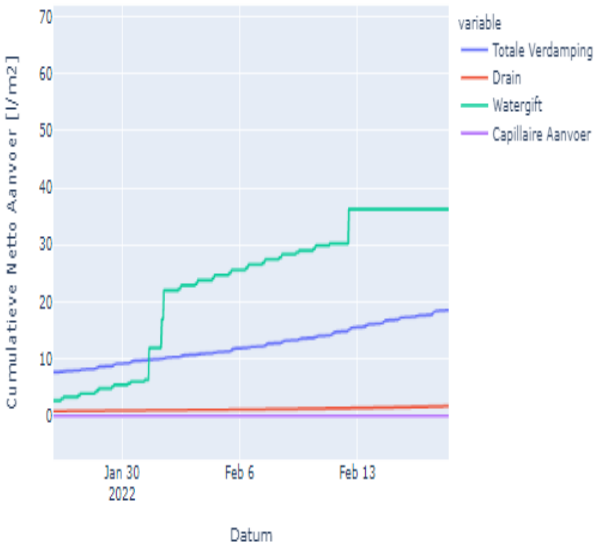
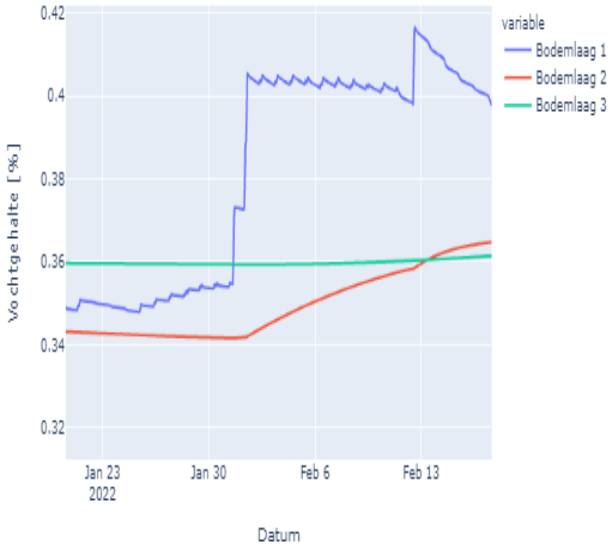
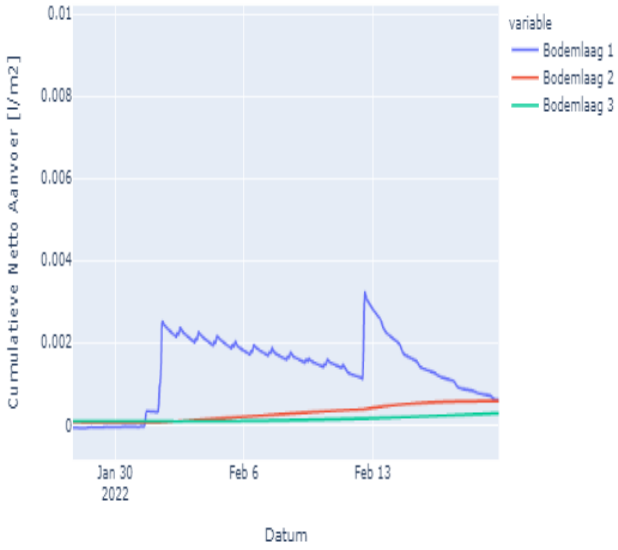
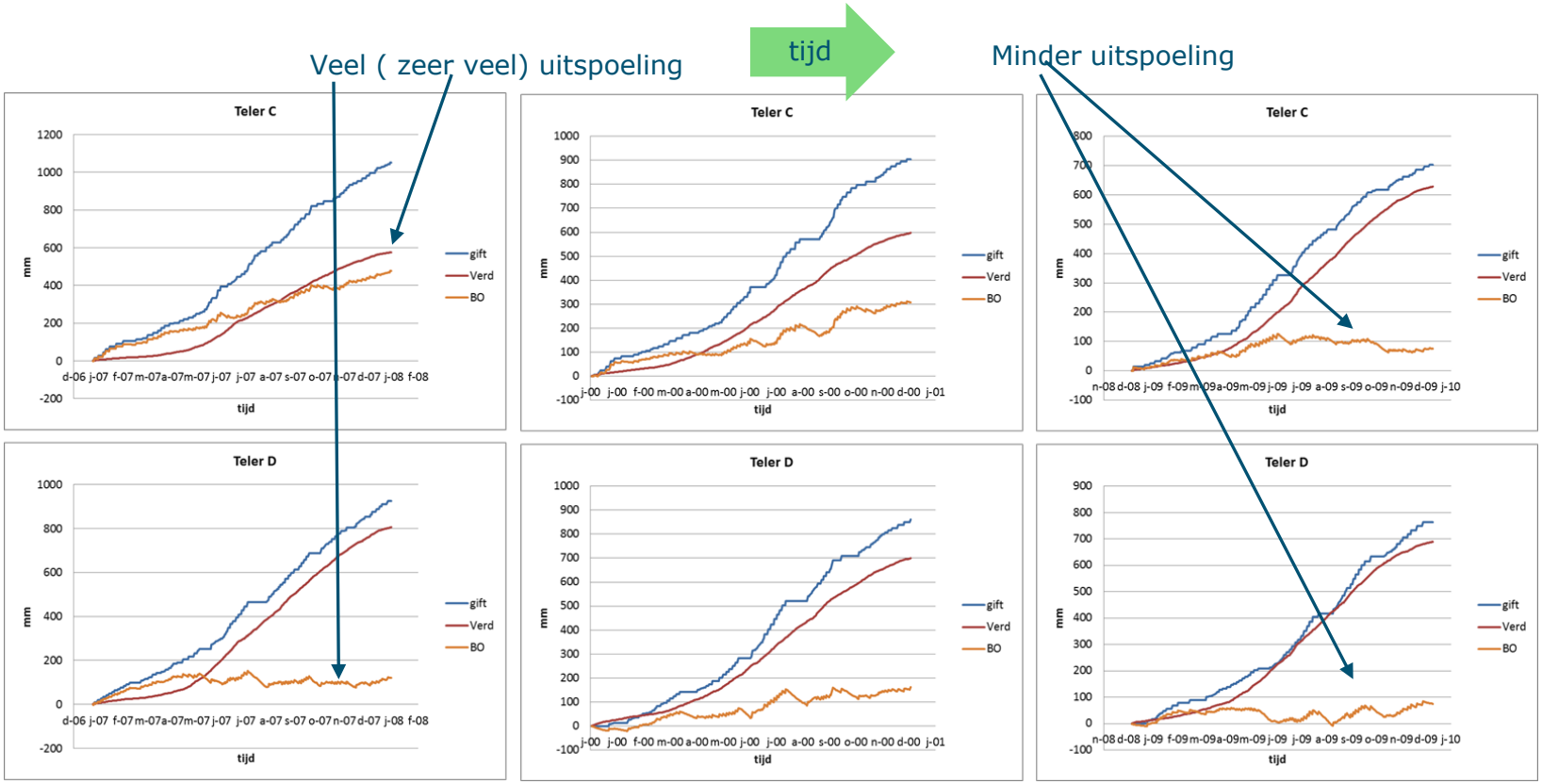
Ingezoomed


Cumulatieve Netto Aanvoer [l/m2]
70
60
50
40
30
20
10
0
Jan 30
2022
Feb 6
Feb 13
Datum
variable
Totale Verdamping
Drain
Watergift
Capillaire Aanvoer

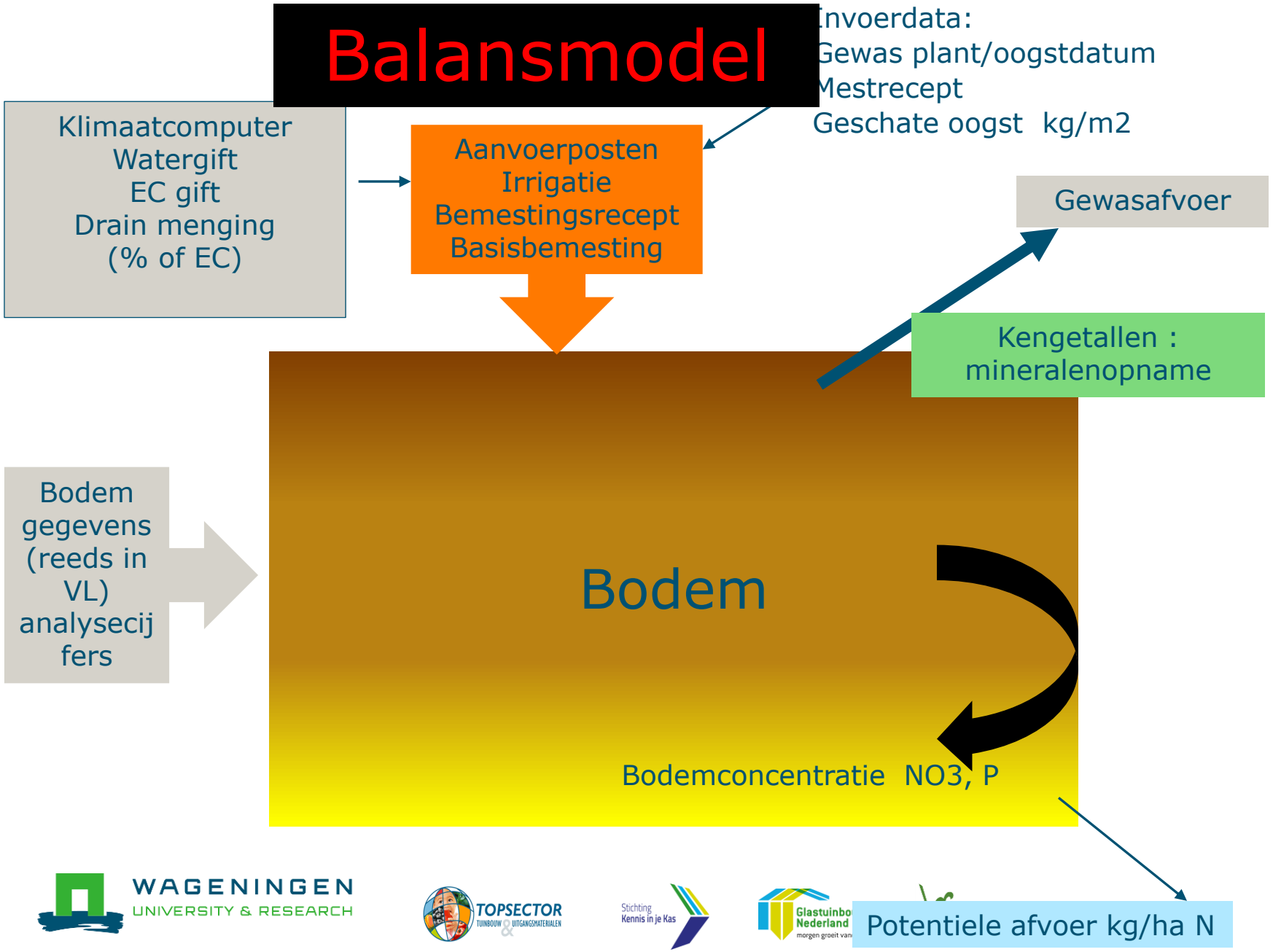

Vochtgehalte [%]
0.42
0.4
0.38
0.36
0.34
0.32
Jan 23
2022
Jan 30
Feb 6
Feb 13
Datum
variable
Bodemlaag 1
Bodemlaag 2
Bodemlaag 3


Cumulatieve Netto Aanvoer [l/m2]
0.01
0.008
0.006
0.004
0.002
0
Jan 30
2022
Feb 6
Feb 13
Datum
variable
Bodemlaag 1
Bodemlaag 2
Bodemlaag 3

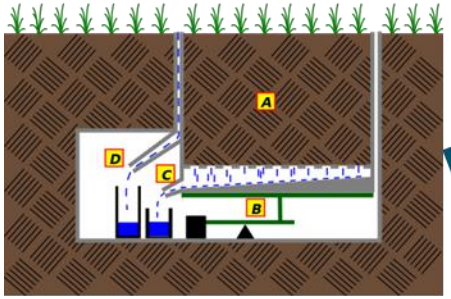
Resultaten implementatie: Voortschrijdend inzicht



Module Nutrienten



Module vochtsensoren

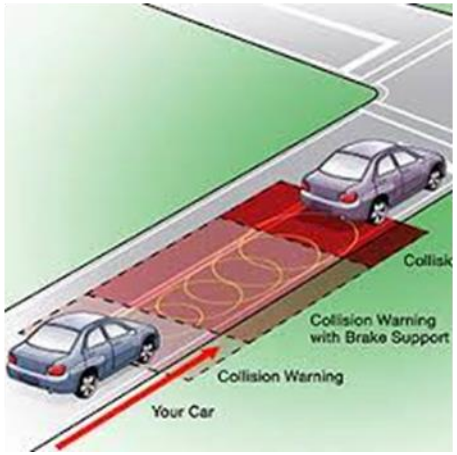


Virtuele Lysimeter

Dagelijks management, op basis van watergiften, klimaatdata en plant/bodemmodellen

Uitspoelingswaarschuwing

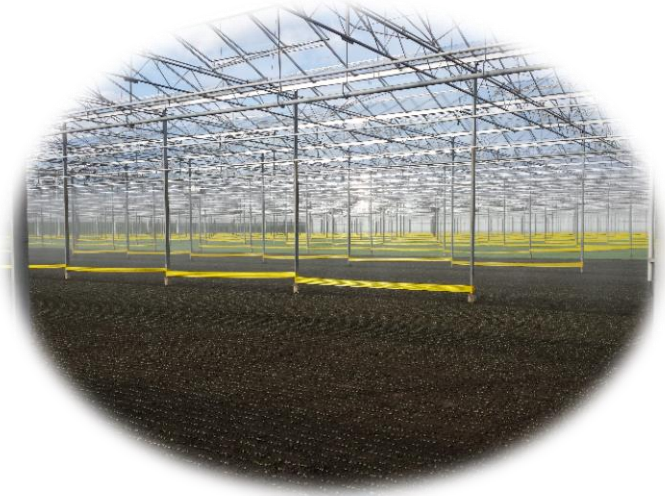
Noodstop op basis van een onafhankelijke waarneming in de bodem



Aangepaste planning

Planning ECONUTRI	2023				2024					2025						2026		
k:kwartaal, h: half jaar	k1	k2	k3	k4		k1	k2	k3	k4		k1	k2	k3	k4	k1	k2		
Aansluiten telers																		
Validatie bestaande bedrijven																		
module nutrientenbeheer																		
validatie																		
module vochtsensoren																		
validatie																		
integratie																		
Implementatie																		
Communicatie/demosntratie																		

Vragen ?



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