

Plants for Power Production: fuel cells on tomato

Energy production in a greenhouse experiment

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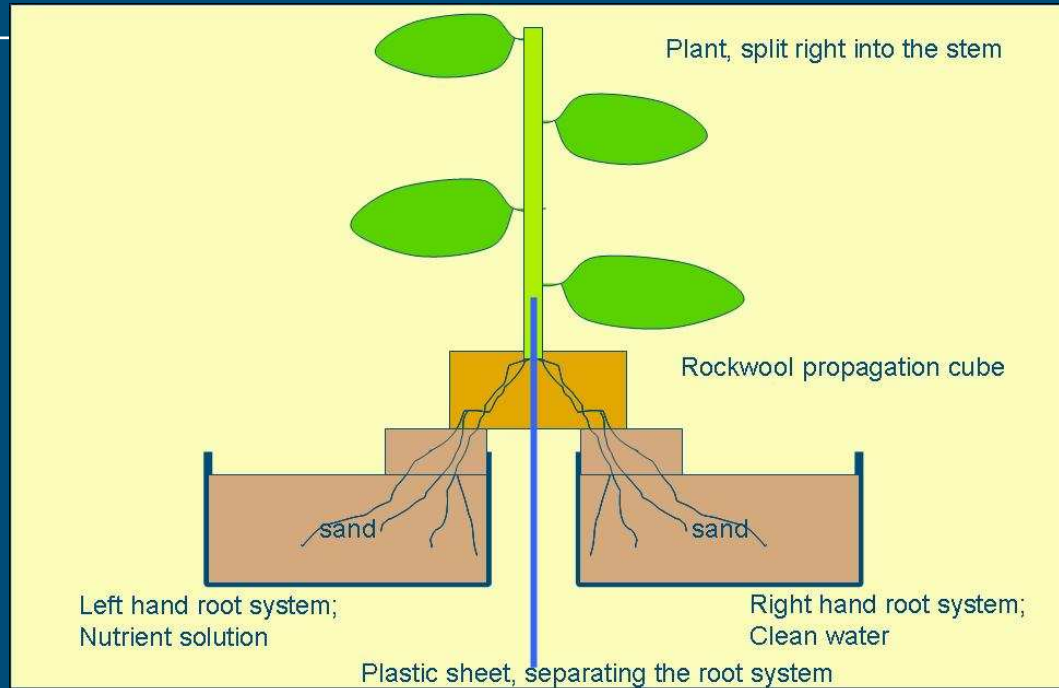
BACKGROUND

2008: air tight boxes



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For quality of life

BACKGROUND: 2009 splity roots



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For quality of life

Treatments 2010

- Controle met vermogensonttrekking (C)
- Spike exudaat 1 met niveau 1 (X1N1) (week 1)
- Spike exudaat 1 met niveau 5 (X1N5) (week 2)
- Spike exudaat 1 met niveau 10 (X1N10) (week3)
- Spike exudaat 1 continu niveau 5 (X1C) (week 1)
- Spike exudaat 2 continu niveau 5 (X2C) (week 2)
- Spike exudaat 3 continu niveau 5 (X3C) (week 3)

plantnummer	Week 1	Week 2	Week 3
1	1-1-C	1-2-C	1-3-C
2	2-1-X1N1	2-2-X1N5	2-3-X1N10
3	3-1-X1C	3-2-X2C	3-3-X3C
4	4-1-X1N1	4-2-X1N5	4-3-X1N10
5	5-1-X1C	5-2-X2C	5-3-X3C
6	6-1-C	6-2-C	6-3-C
7	7-1-X1C	7-2-X2C	7-3-X3C
8	8-1-C	8-2-C	8-3-C
9	9-1-X1N1	9-2-X1N5	9-3-X1N10
10	10-1-C	10-2-C	10-3-C
11	11-1-X1C	11-2-X2C	11-3-X3C
12	12-1-X1N1	12-2-X1N5	12-3-X1N10

Week 1



Week 2

R R R R R R R R

R C X1N5 X2C X1N5 X2C C R

R X2C C X1N5 C X2C X1N5 R

R R R R R R R R



Week3

R R R R R R R R

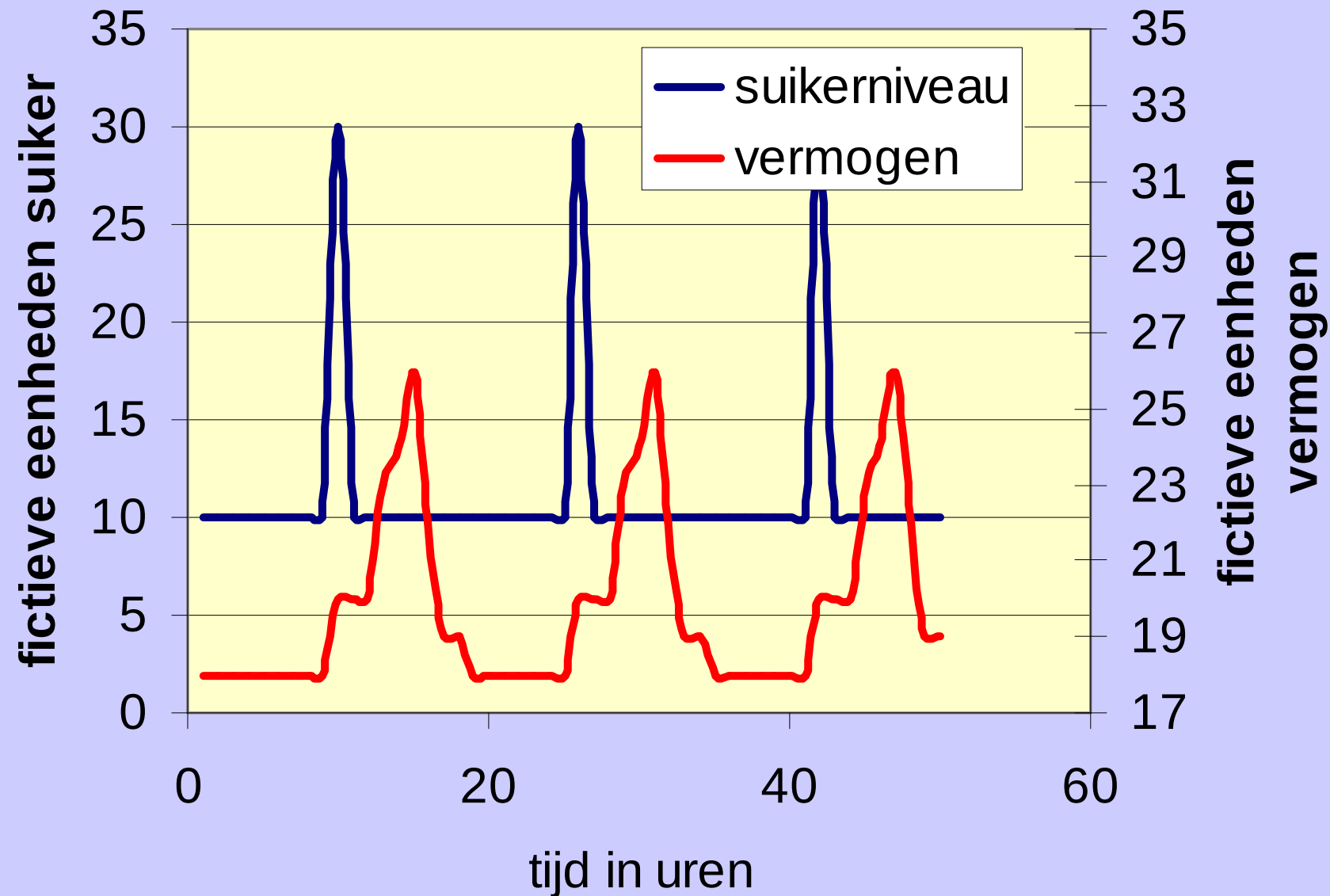
R C X3N10 X1C X1N10 X3C C R

R X3C C X1N10 C X3C X1N10 R

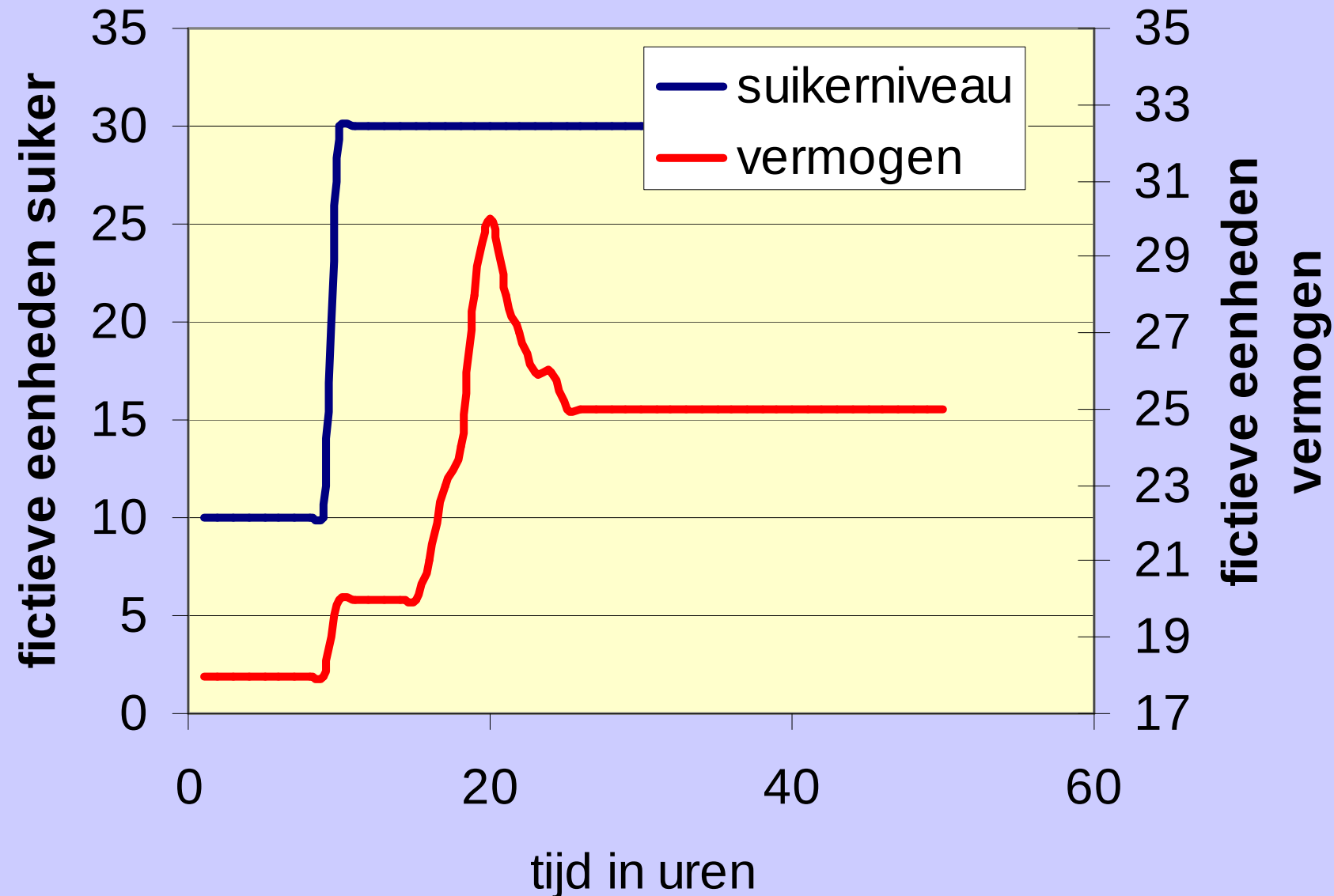
R R R R R R R R



Theoretical effect of spikes



Theoretical effect of level increase



Questions

- Improving the sampling procedure
- Testing of different rootstock in relation with exudate production
- Measuring of exudate production of wild tomato plants
- Indirect measurement of root exudate with MFC

Wageningen UR Glastuinbouw

Innovaties vóór en mét de glastuinbouw

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