

Introduction



Dutch General Inspection Service (NAK)

Jan Luimes



Programme



- Monitoring aphids



- Testing potato cyst nematodes (PCN)



Monitoring aphids



Purpose:

- Provide farmers with information
- Determine the haulm killing dates



Methods



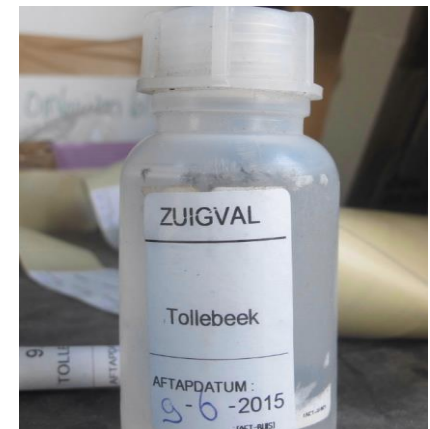
- Suction trap
- Yellow trap



Information about the sustion trap



- Number: 3
- Height: 12 meter
- Time of year of operation: 1st May to 1st September
- Frequency of emptying: Daily



Information about the yellow trap



- Number: 40
- Color: yellow
- Time of year of operation: 1st May to 1st September
- Frequency of emptying: Daily, except Sunday



To determine the vector pressure



Depends on:

- The number of aphids
- Efficiency of transmission virus





Efficiency of transmission

Name	Value
<i>Myzus persicae</i>	1,00
<i>Myzus certus</i>	1,00
<i>Myzus ascolonicus</i>	0,01
<i>Phorodon humili</i>	0,45
<i>Macrosiphum euphorbiae</i>	0,01
<i>Aphis fabae</i>	0,10
<i>Aphis nasturtii</i>	0,60
<i>Acyrtosiphon pisum</i>	0,10
<i>Rhopalosiphum insertum/padi</i>	0,03
<i>Metopolophium dirhodum</i>	0,01
<i>Brachycaudus helichrysi</i>	0,01
<i>Aphis frangulae</i>	0,40
<i>Brevicoryne brassicae</i>	-
<i>Brachycaudus</i> spp	-
<i>Aulacorthum solani</i>	0,01

Determine the vector pressure



	<i>efficiency</i>		<i>number</i>		
<i>Myzus persicae</i>	1,0	x	2	=	2,0
<i>Aphis fabae</i>	0,1	x	5	=	0,5
					<hr/>
Vector pressure					2,5

Determination in the laboratory



Myzus persicae



Myzus ascolonicus

Acyrtosiphon pisum



The information (1/2)



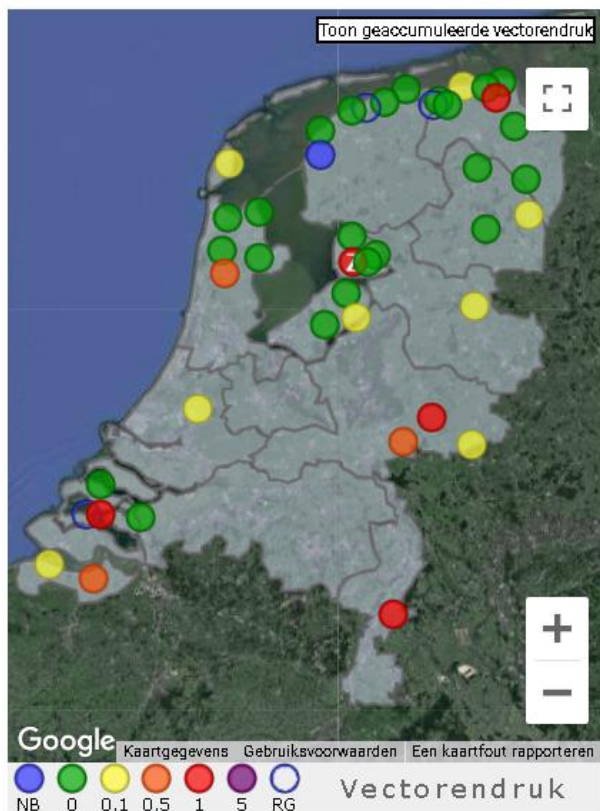
- The Information is presented daily to growers via login with password
- Growers pay NAK as part of field inspection service

The information (2/2)



Actuele bladluissituatie

Klik op een locatie in de kaart voor de actuele bladluissituatie.



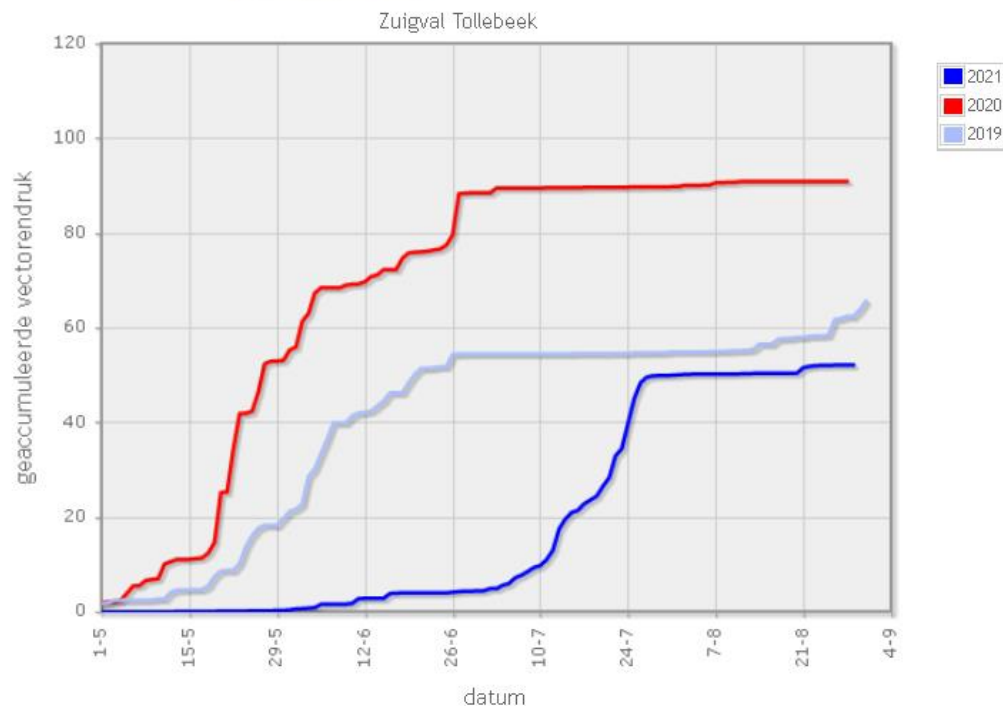
Locaties zijn vangbakken of zuigvallen (Z).
NB = niet bekend
RG = Registratie gestopt.

Dagvangst woensdag 16 juni 2021

16-06-2021

Locatie Tollebeek
Type Zuigval
Vectorendruk 1,01
Geaccumuleerd 3,91

[Dagvangst per soort](#)



Testing potato cyst nematodes (PCN)



- General information
- Sampling
- Analysis
- Policy

General information



- Before planting of seed potatoes the soil must be checked for PCN
- The NAK (Dutch General Inspection Service) is in charge of this implementation
- 45.000 ha annual; 140.000 soilsamples

PCN in the field



pcn on the roots



pcn and yield reduction

PCN in the laboratory



The cyst (0.5 mm)



Larvae and eggs

Sampling by hand or by quad



Grid per ha



- Core number 100
- Core size 6 cc
- Grid width 11 meter
- Grid length 9 meter
- Sample size 600 cc



Analysis

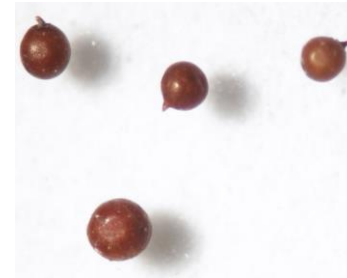


- Drying the soil samples
- Extraction
- Checking the presence of PCN
- Determination of the content
- Determination of the species

Drying the soil samples



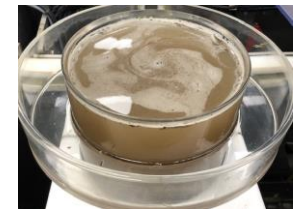
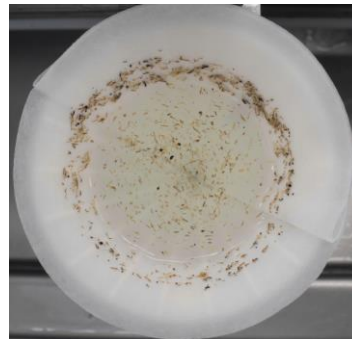
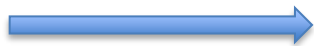
Extraction



Ca. 0.5 mm



Rinsing machine
Capacity: 900 samples a day



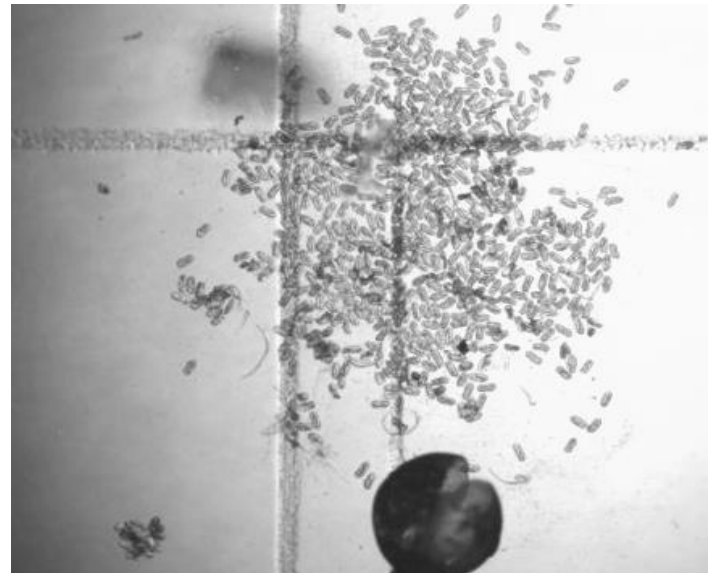
Separation by:

- Floating on water
- Seives; with mesh size
 - 4 mm
 - 1 mm
 - 0.25 mm (seive below)

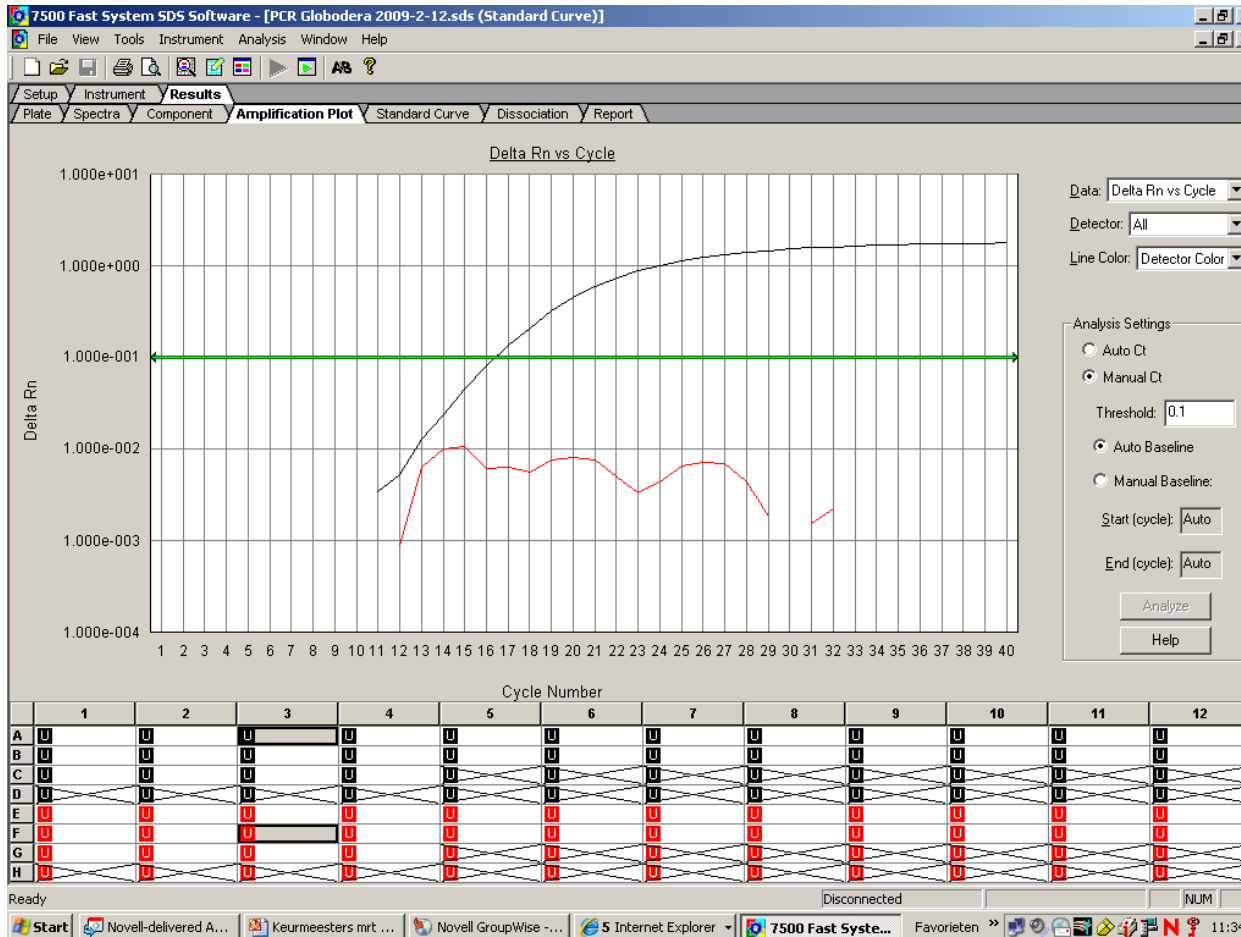
Checking the presence of PCN



Determination of the content



Determination of the species



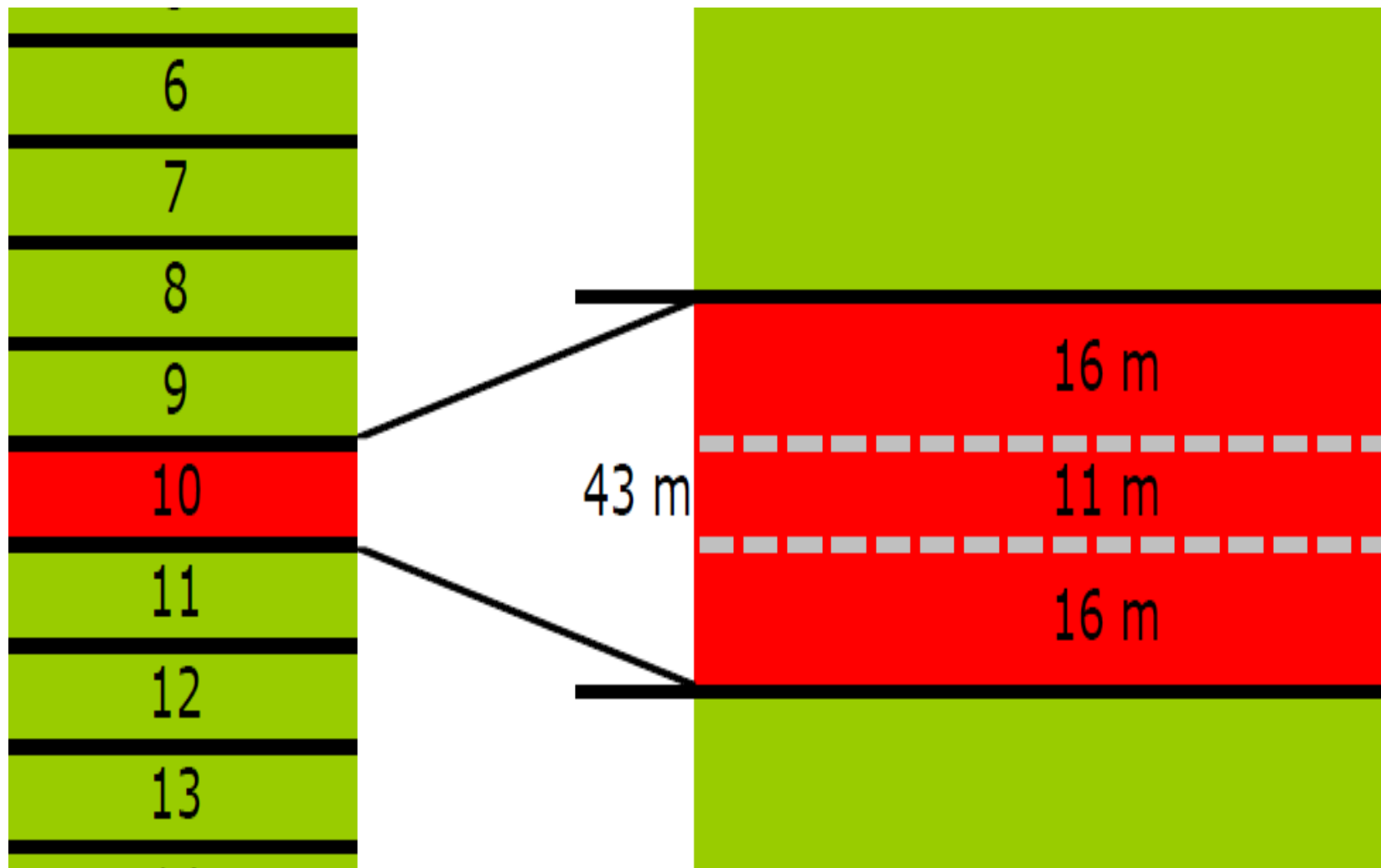
PCR to distinguish
G.Pal and G.Ros

Policy (infested field)

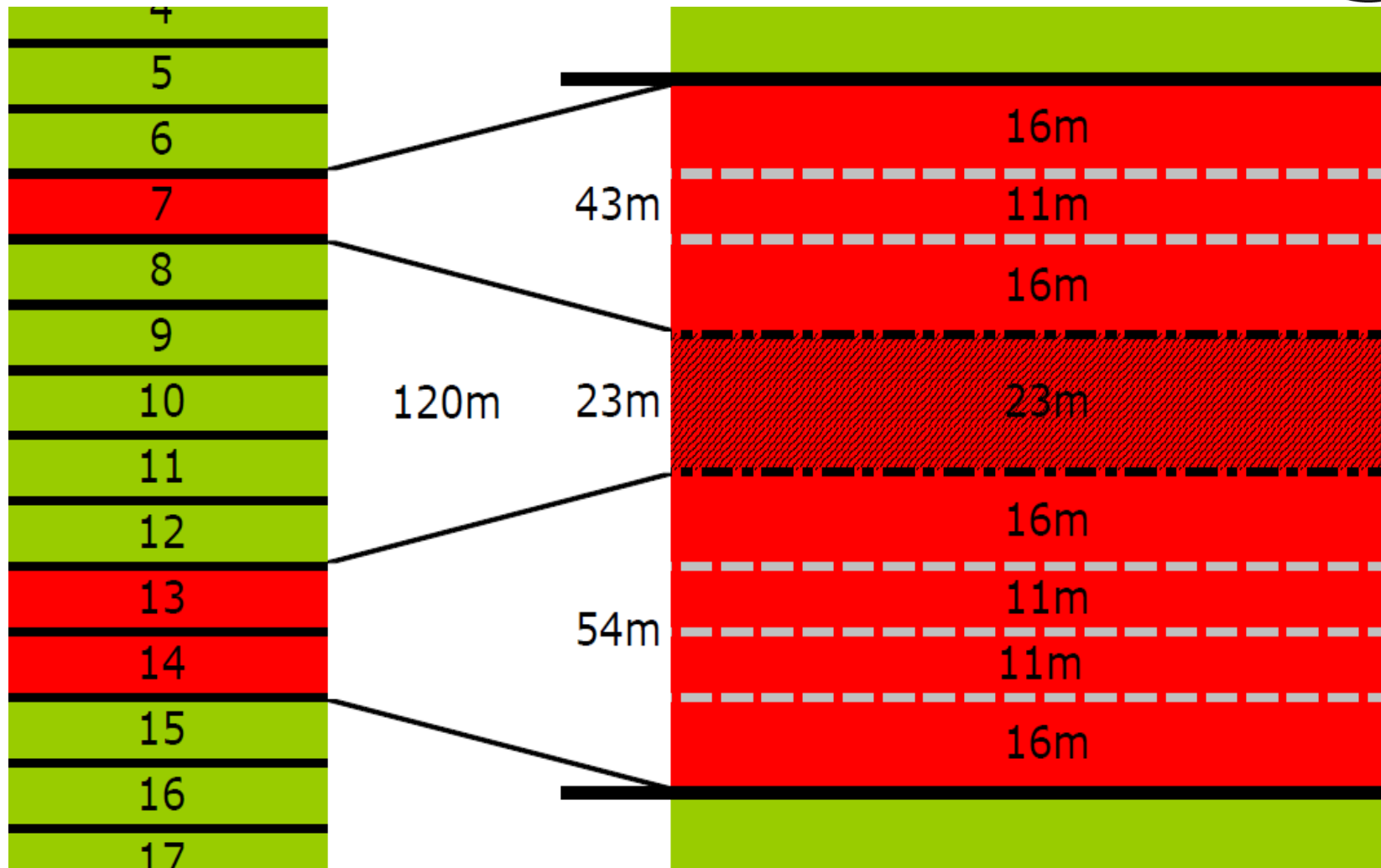


- Buffer zones are 16 meters on both sides
- The distance between two infestations including the bufferzones must be at least 27 meter

Buffer zones (1/2)



Buffer zones (2/2)





Thanks for your attention