Die Effek van 10 jaar se Tafeldruifproduksie op Grondchemie in die Wes-Kaap

Pieter Raath

Inhoud

1. Ontledingsverslag

2. Tendense oor tyd

3. Gevallestudies

4. Samevatting

www.bemlab.co.za

16 Van der Berg Crescent
Gant's Centre
Strand

Posbus 684
Somerset Mall,
7137

Tel. (021) 853-1490
Faks (021) 853-1423

E-Pos admin@bemlab.co.za

Vat Reg. No. 4200161414

Verslag No.: **GR4551_b** *(Vervang verslag no.: GR004551_a.DOC)*

A. Roos
Worcester Plaas
Posbus 2
De Doorns
6875

Grondontledingsverslag

Datum ontvang: 20/02/2014
Datum ontleed: 21/02/2014

Boord	Lab. No.	Diepte (cm)	Grond	pH (KCl)	Weerst. (Ohm)	H^+ (cmol/kg)	Klip (Vol %)	P Bray II mg/kg	K mg/kg	Uitruilbare katione (cmol(+)/kg) Na	K	Ca	Mg	Cu mg/kg	Zn mg/kg	Mn mg/kg	B mg/kg	Fe mg/kg	C %
Blok 2- Regal	4551	60	Sand	5.4	820	0.50	9	222	167	0.10	0.43	4.09	0.94	14.06	19.3	131.9	0.26	184.29	0.84
Blok 12- Midnight	4552	60	Sand	4.7	2660	0.94	14	127	58	0.06	0.15	2.55	0.52	11.66	8.3	35.6	0.17	250.42	0.61
Blok 16- Flame	4553	60	Sand	4.6	1890	1.19	25	187	111	0.07	0.28	3.56	0.78	14.06	11.4	43.3	0.32	257.98	0.91
Blok 13- Midnight	4554	60	Sand	5.1	1760	0.94	15	209	100	0.06	0.26	4.79	0.78	19.93	18.8	66.0	0.32	182.87	0.84
Metodes[#]				3108	3106	3109		3117		3113	3113	3113	3113	3115	3115	3115	3114		3107

Indien pH > 7.0 is word die Olsen metode(3118) vir die bepaling van P gebruik.
[#]Verwys na BemLab werkinstruksies

Monster toestand: Monsters ontvang in goeie toestand.

Basis Versadiging

Boord No.	Lab. No.	Na %	K %	Ca %	Mg %	T-Waarde cmol/kg
Blok 2- Regal	4551	1.60	7.07	67.53	15.55	6.06
Blok 12- Midnight	4552	1.40	3.50	60.44	12.38	4.22
Blok 16- Flame	4553	1.26	4.82	60.45	13.24	5.88
Blok 13- Midnight	4554	0.86	3.74	70.16	11.46	6.82

BEMESTINGSRIGLYN VIR PRODUKSIEWINGERD

Aanbeveling vir die verbetering van chemiese grondtoestande in bestaande wingerde:

Boord	Vrug	Grond	Gips	Kalk (ton/ha)		Instandhoud kalk (ton/ha)	
			(ton/ha)	Kalsities	Dolomities	Kalsities	Dolomities
Blok 2- Regal	Tafeldruiwe	Sand	0	0	0	1	1
Blok 12- Midnight	Tafeldruiwe	Sand	0	15	0	0	1
Blok 16- Flame	Tafeldruiwe	Sand	0	18	0	0	1
Blok 13- Midnight	Tafeldruiwe	Sand	0	0	0	0	1

Bemestingsriglyn vir produksiewingerd (Kunsmispeile in kg/ha):

Boord	Vrug	Groeikrag	Grond	Opbrengs	2-3 blaarstadium			Na Set		Na Oes
				ton/ha	N	P	K	N	K	N
Blok 2- Regal	Tafeldruiwe	Normaal	Sand	18	25	0	0	25 (a)	0	25
Blok 12- Midnight	Tafeldruiwe	Normaal	Sand	18	25	0	25	25 (a)	25	25
Blok 16- Flame	Tafeldruiwe	Normaal	Sand	18	25	0	0	25 (a)	0	25
Blok 13- Midnight	Tafeldruiwe	Normaal	Sand	18	25	0	25	25 (a)	25	25

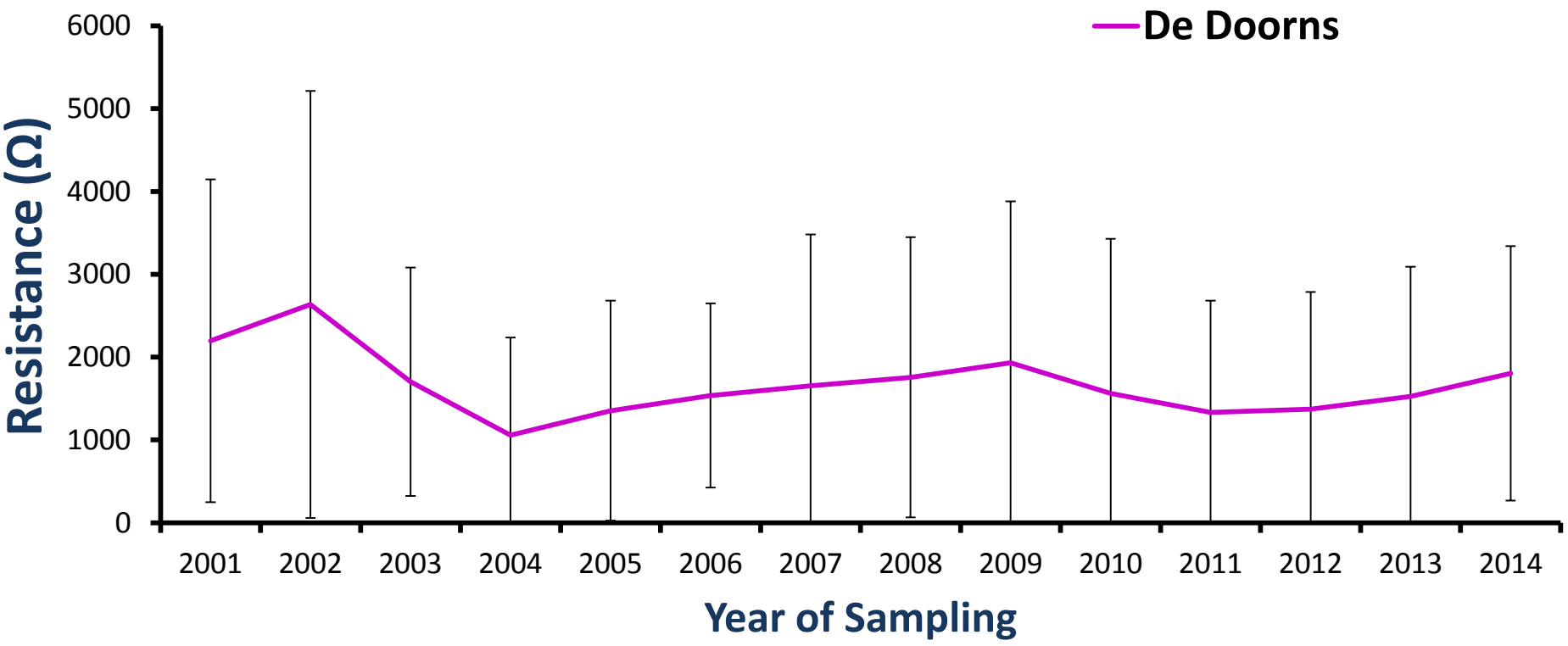
(a) Hierdie bemesting kan weggelaat word indien groeikrag voldoende is.

- Waar `n peuldekgewas gedurende die winter gebruik word, kan stikstofbemesting in die lente weggelaat word.
- Sand: verdeel bemesting in tweeweeklikse paaiemente.
- By droëland wingerde moet bemesting voor reën toegedien word.
- Bemesting van dekgewas: Addisionele stikstof

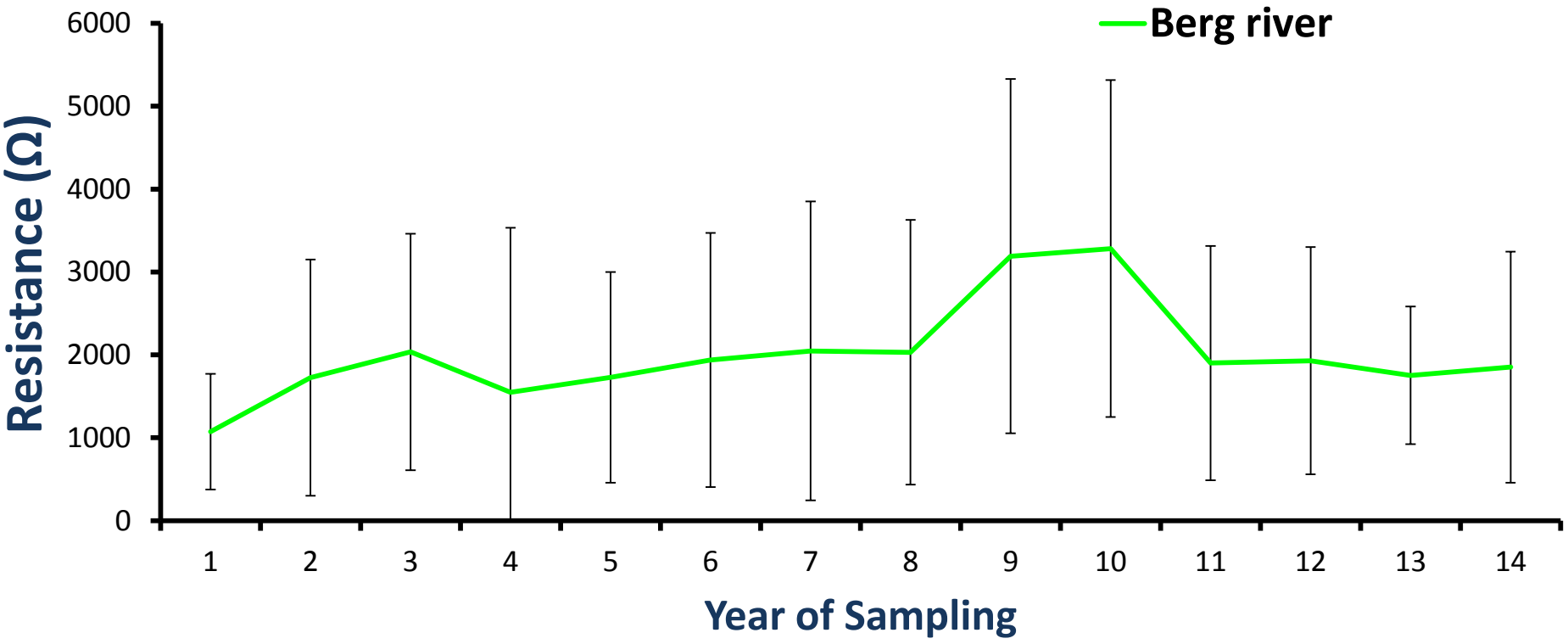
Dr. Pieter Raath
.....
namens BemLab

13-03-2014
.....
Datum gerapporteer

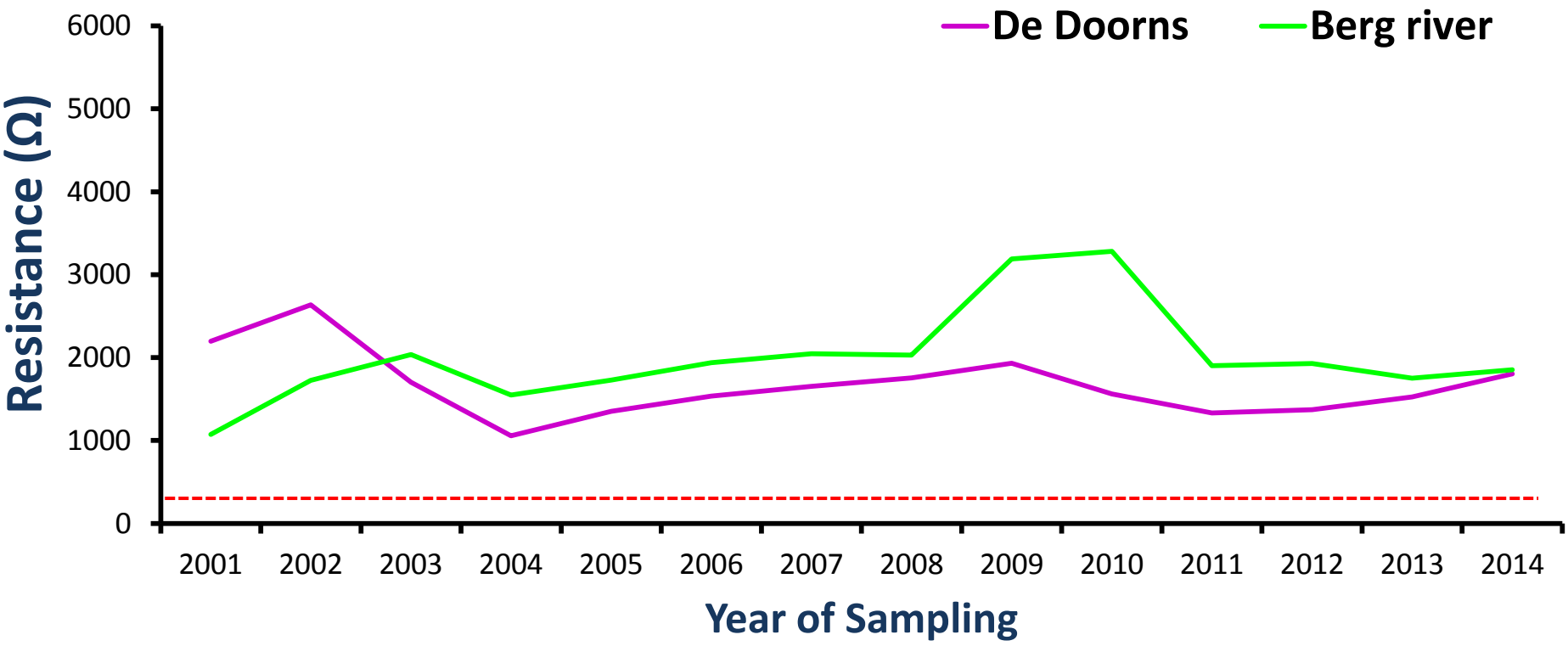
Brak/*Salinity*



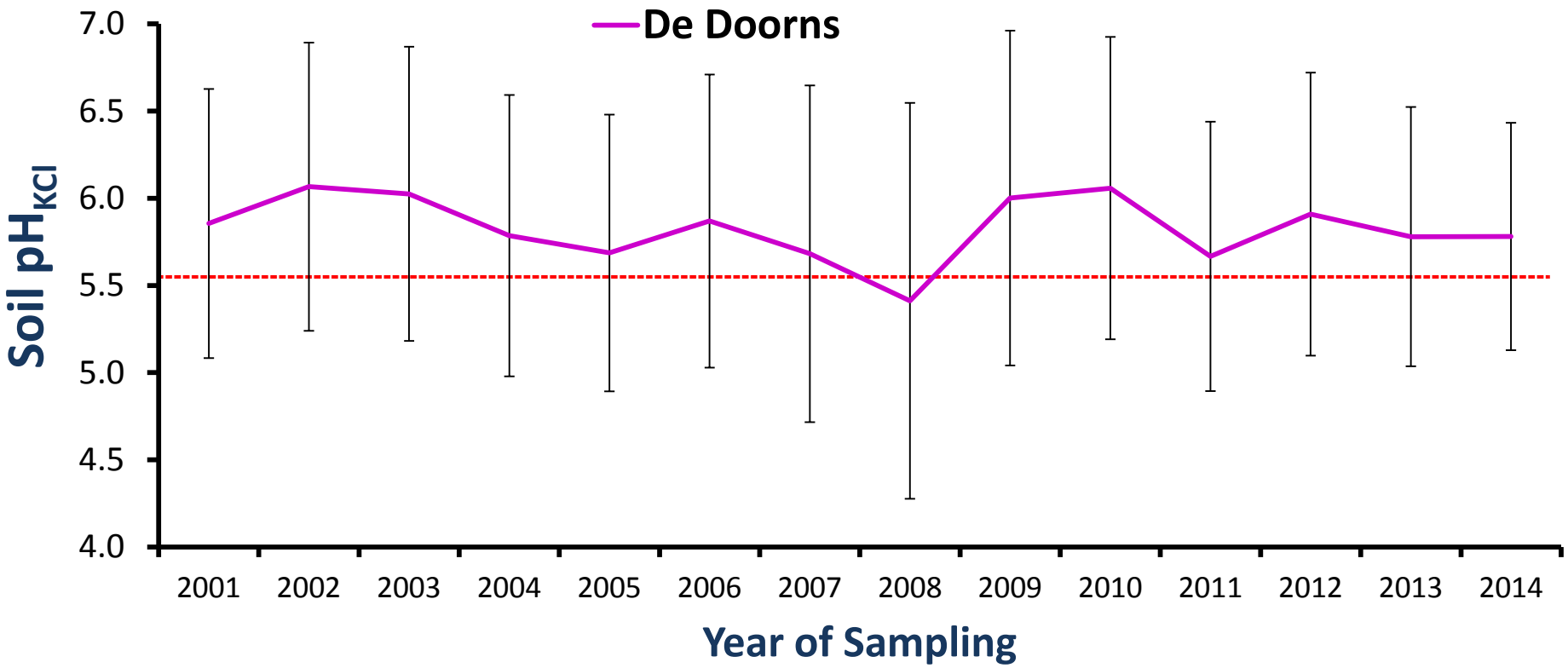
Brak/*Salinity*



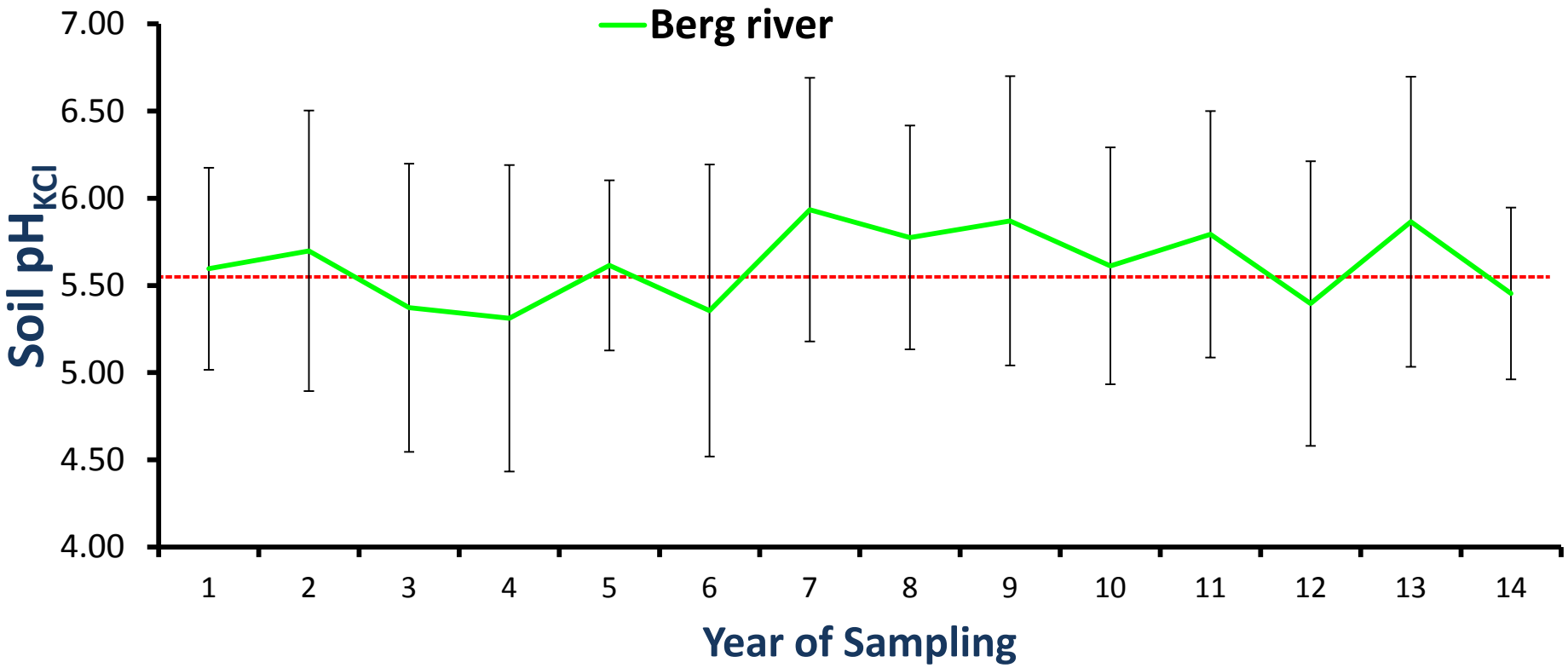
Brak/*Salinity*



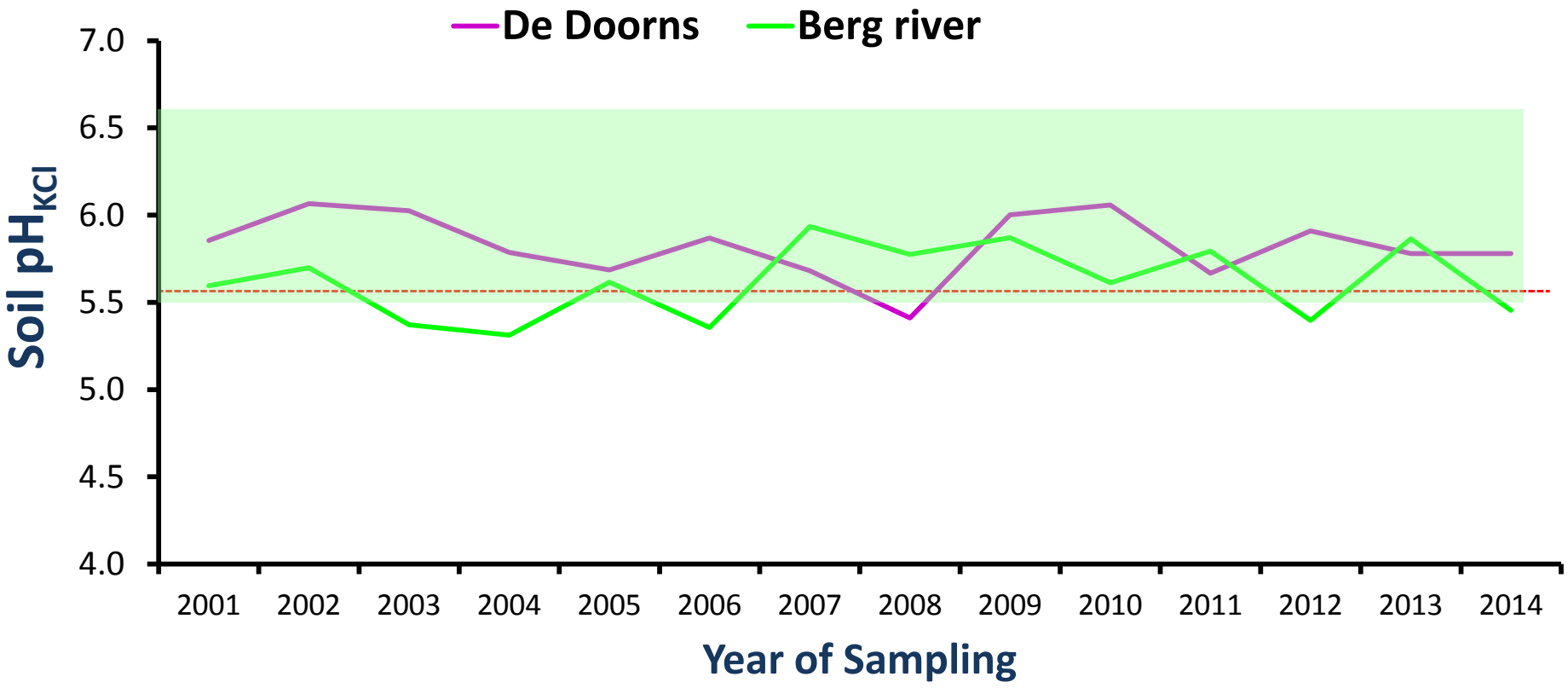
Grond pH_{KCl}/*Soil* pH_{KCl}



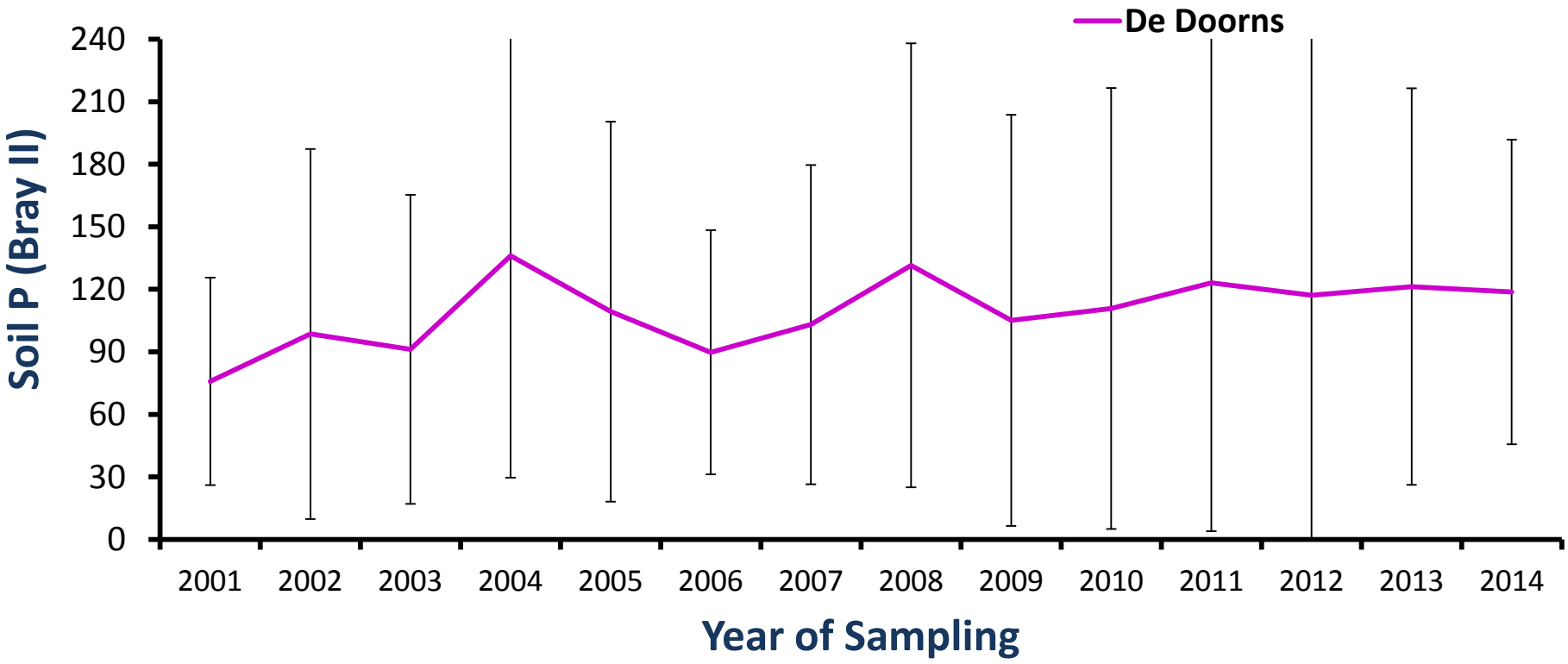
Grond pH_{KCl}/*Soil* pH_{KCl}



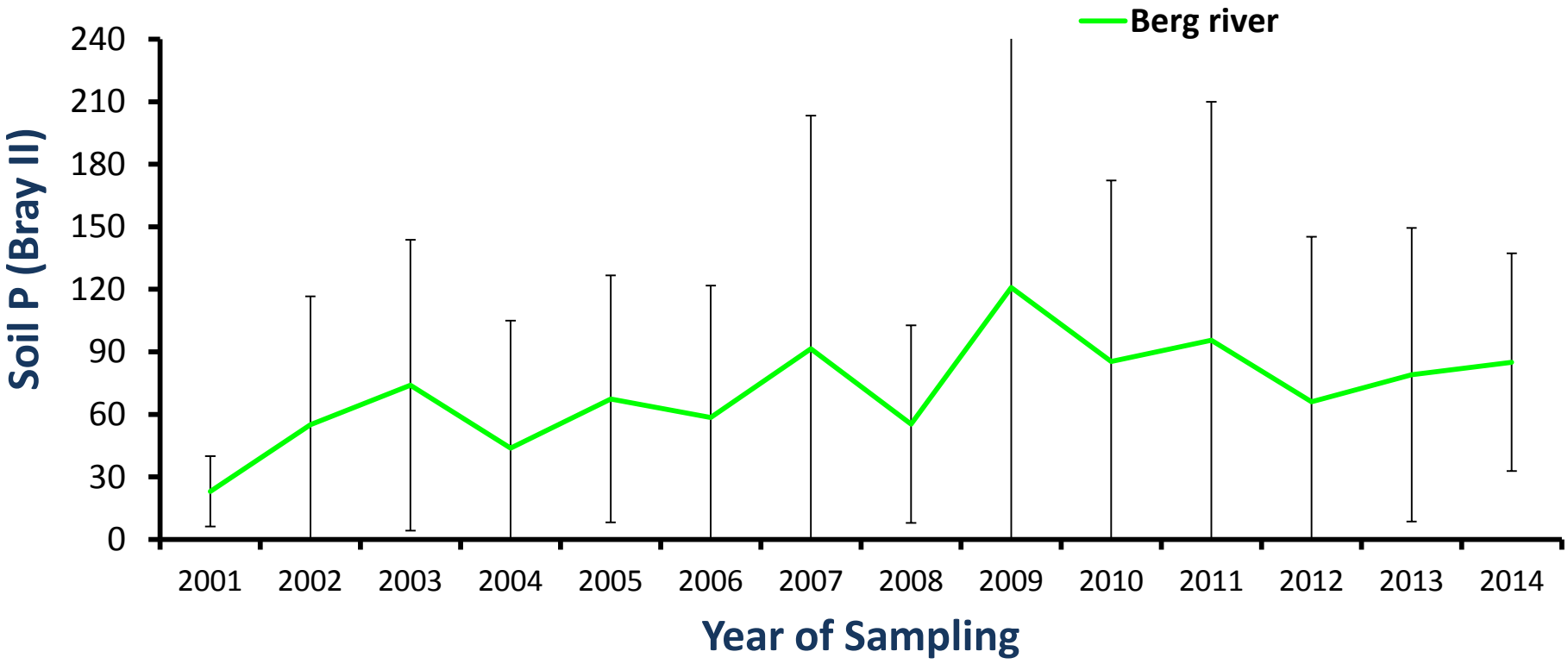
Grond pH_{KCl}/*Soil* pH_{KCl}



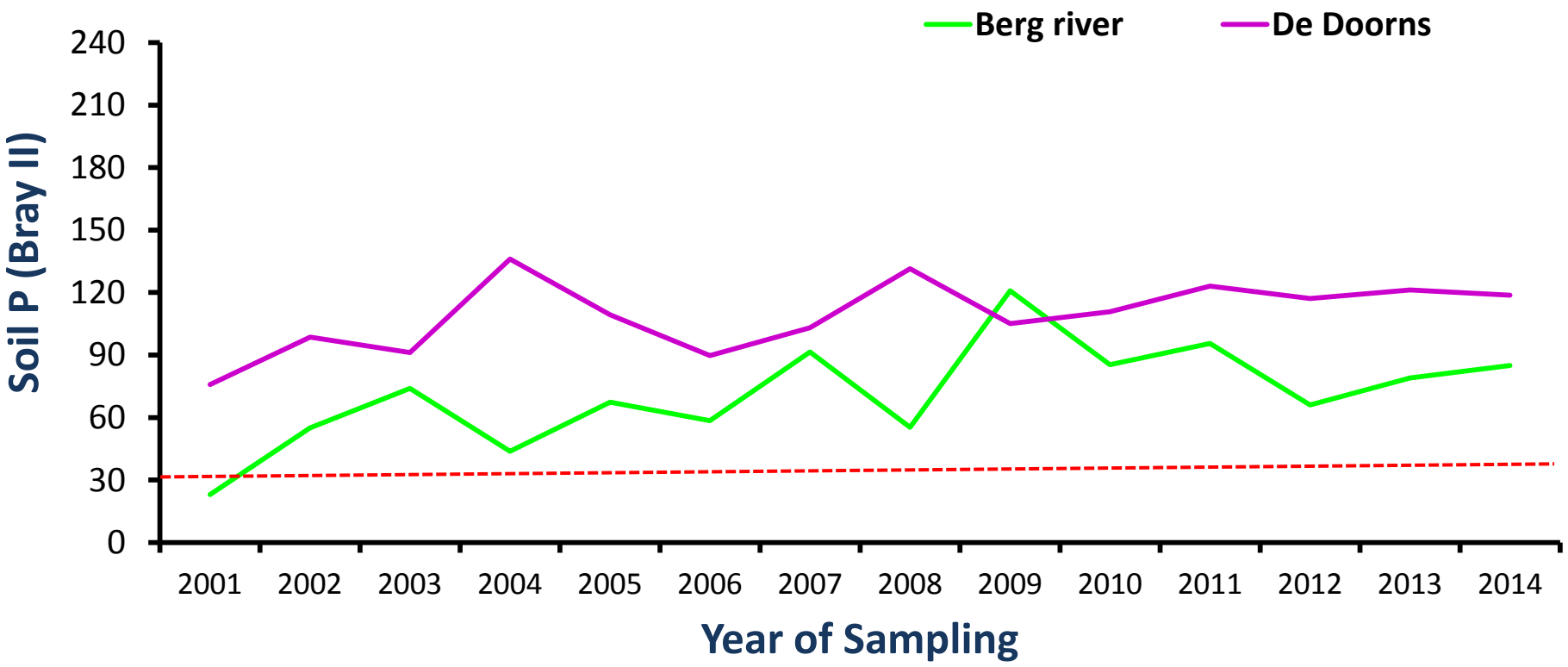
Fosfaat/*Phosphate*



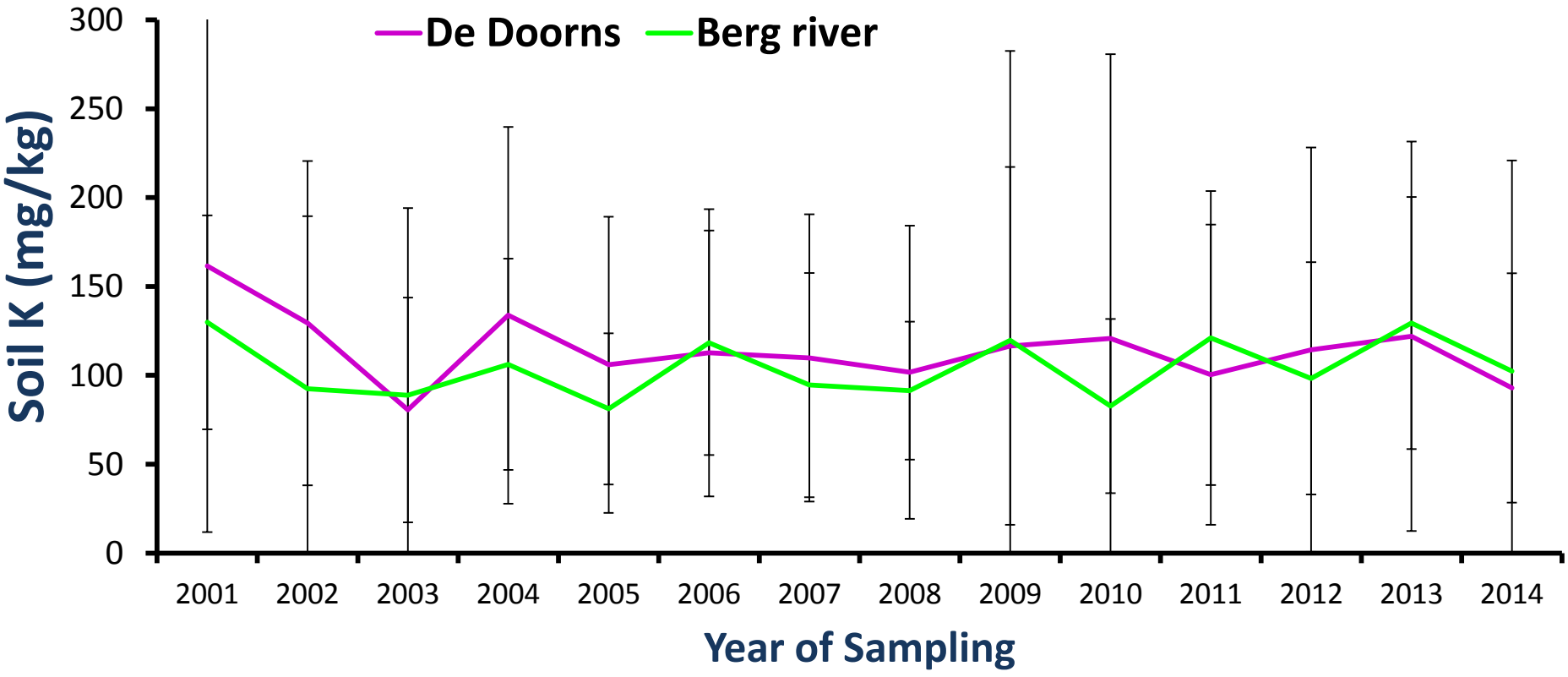
Fosfaat/*Phosphate*



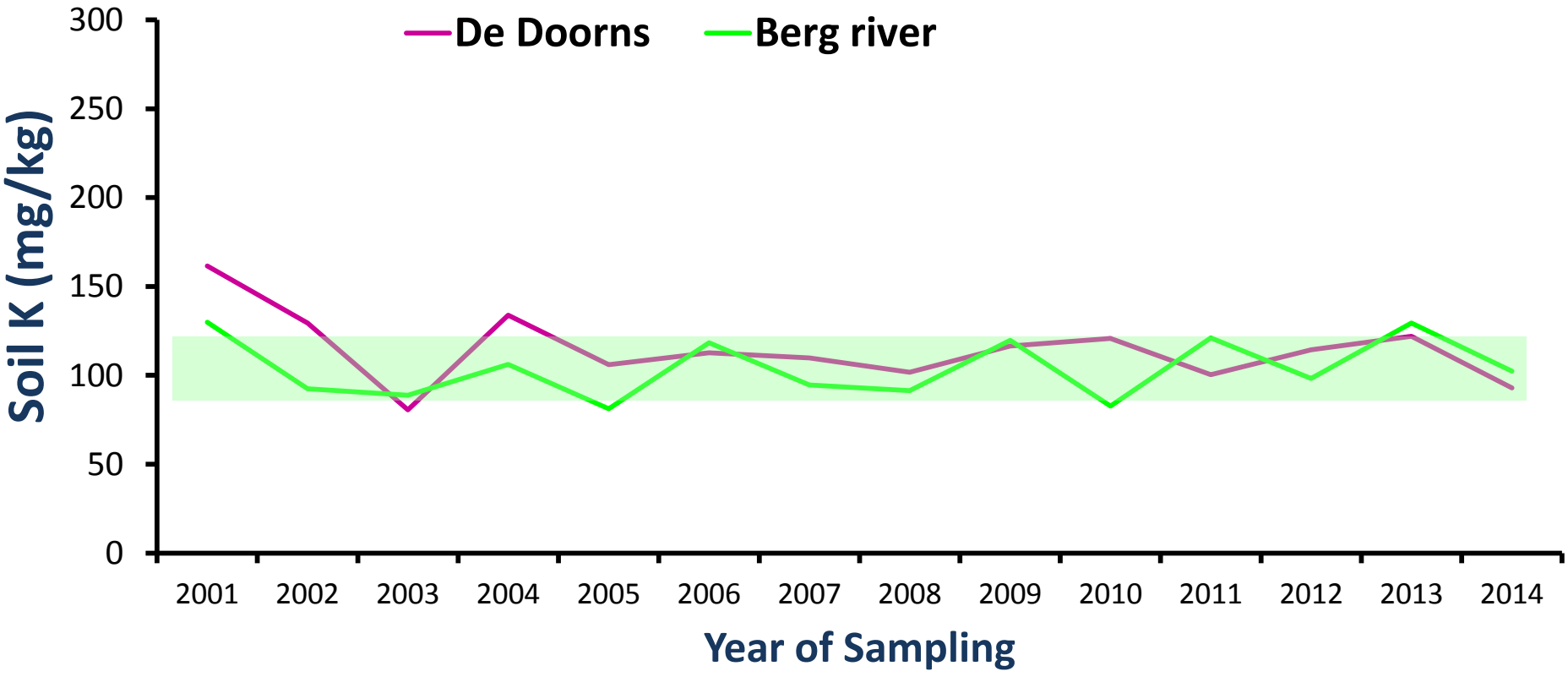
Fosfaat/*Phosphate*



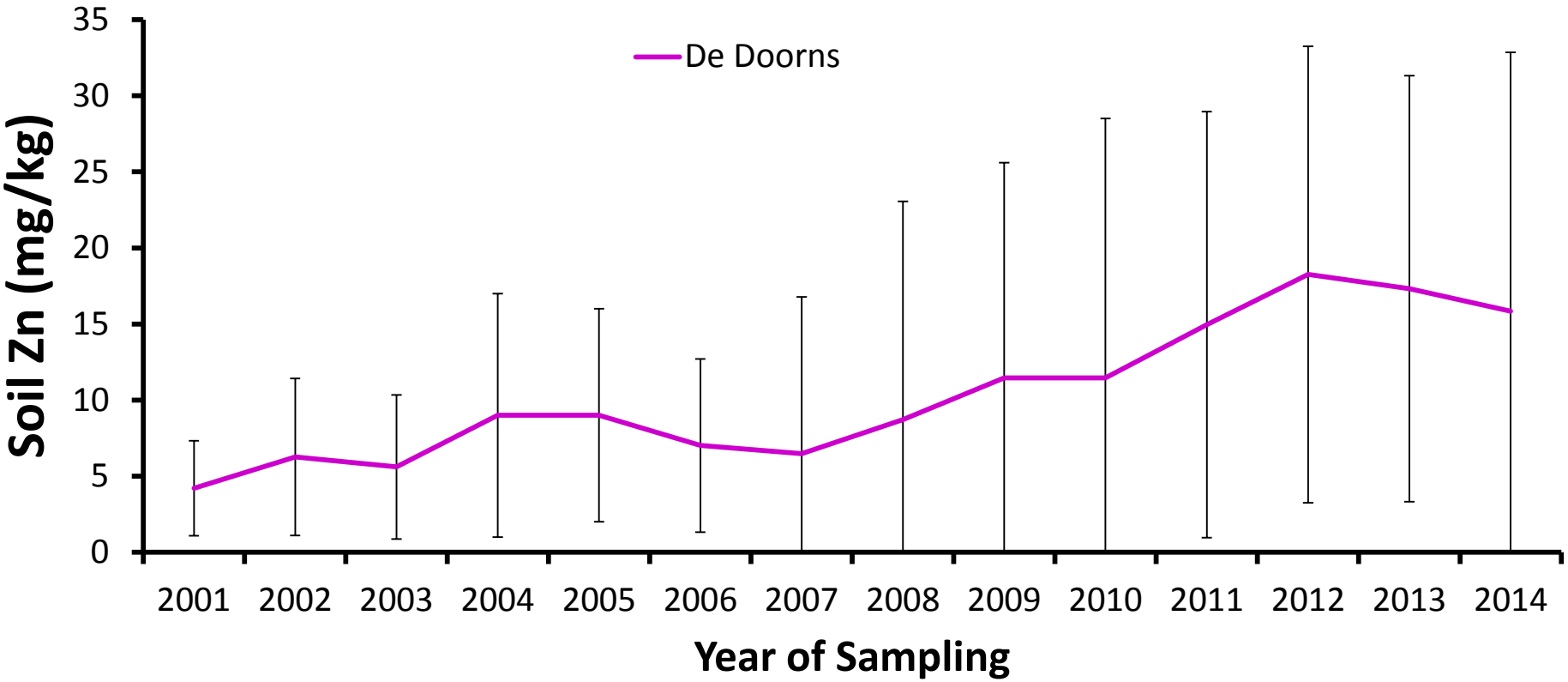
Kalium/*Potassium*



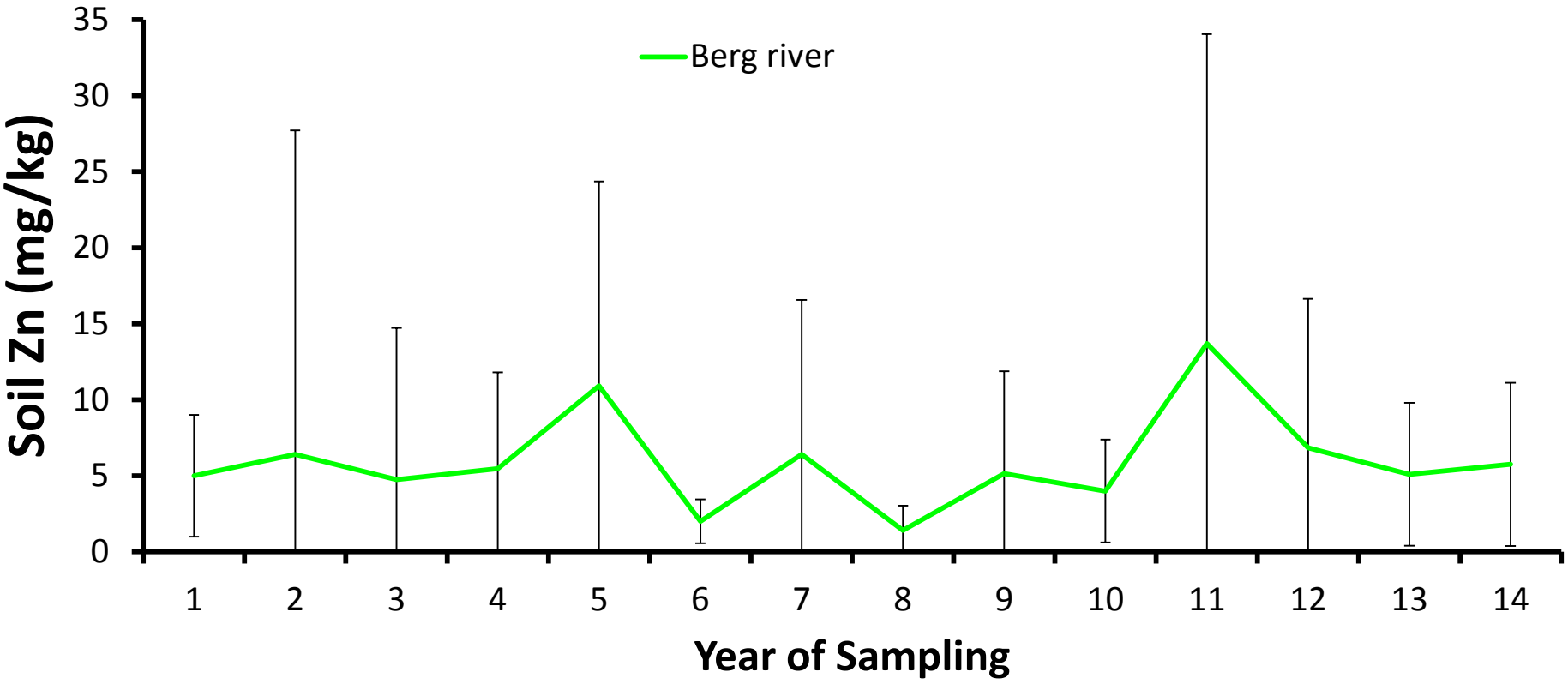
Kalium/*Potassium*



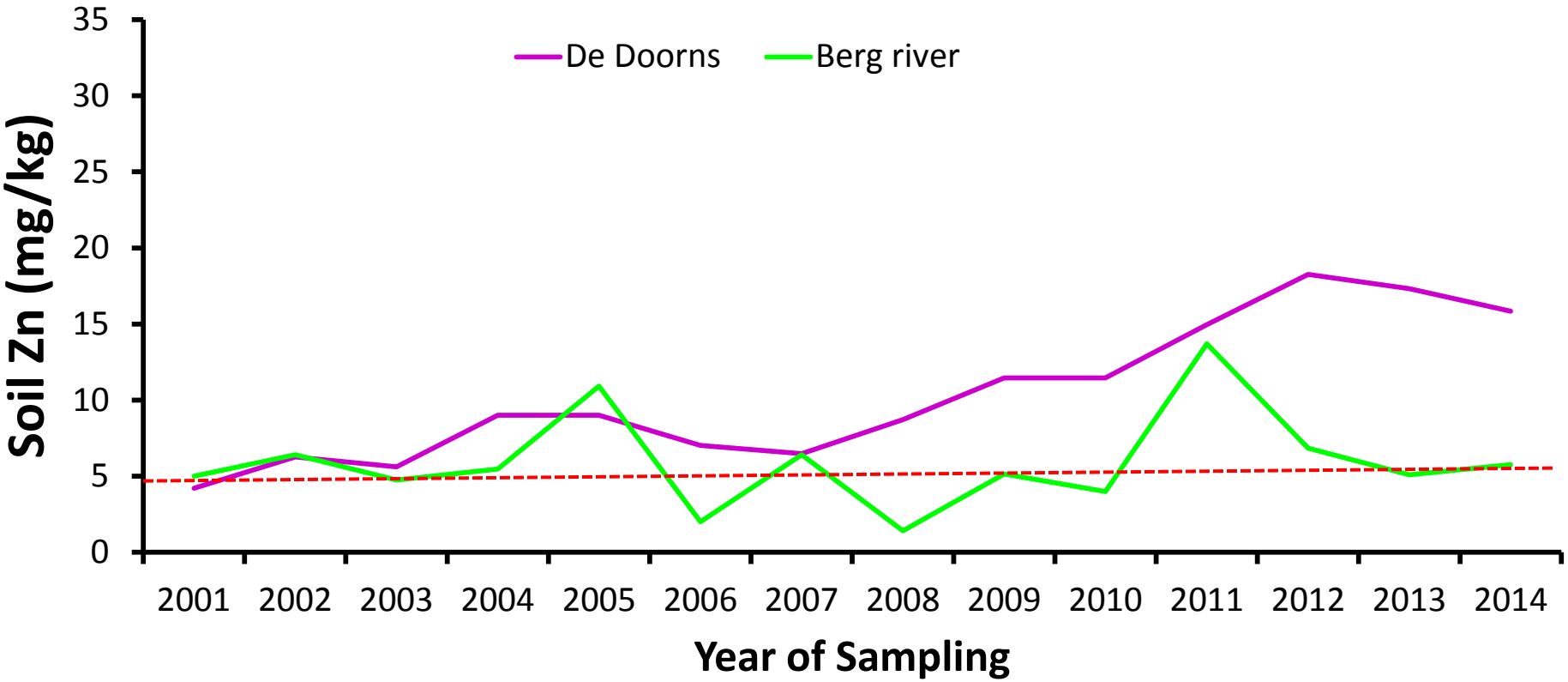
Sink/*Zink*


De Doorns
Soil Zn (mg/kg)
0
5
10
15
20
25
30
35
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year of Sampling

Sink/*Zink*


Berg river
Soil Zn (mg/kg)
35
30
25
20
15
10
5
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Year of Sampling

Sink/*Zink*


De Doorns
Berg river
Soil Zn (mg/kg)
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year of Sampling

Voorbeeld van drie blokke/
Example of three blocks

Farm	Yr	pH	P	Na	K	Ca	Mg	Zn	Mn	B	C
1	2004	5.80									
	2007	6.00									
% change		3.45									
2	2004	7.7									
	2013	6.9									
% change		-10									
3	2006	6.2									
	2012	6.1									
% change		-2									

Voorbeeld van drie blokke/ *Example of three blocks*

Farm	Yr	pH	P	Na	K	Ca	Mg	Zn	Mn	B	C
1	2004	5.80	130								
	2007	6.00	129								
% change		3.45	-1								
2	2004	7.7	**24**								
	2013	6.9	**282**								
% change		-10	**1055**								
3	2006	6.2	**83**								
	2012	6.1	**169**								
% change		-2	**104**								

Voorbeeld van drie blokke/
Example of three blocks

Farm	Yr	pH	P	Na	K	Ca	Mg	Zn	Mn	B	C
1	2004	5.80	130	0.8	0.9	9	3	17.4	53	0.3	1.5
	2007	6.00	129	0.3	1	8	3	4.3	21	0.5	0.9
% change		3.45	-1	-65	-23	-14	-23	-75	-61	50	-43
2	2004	7.7	24	0.18	0.7	20.4	2.1	**0.03**	**0.5**	0.47	0.5
	2013	6.9	282	0.25	0.6	15.9	2.1	**7**	**13**	0.31	0.7
% change		-10	1055	33	-12	-22	-3	**24372**	**2267**	-33	64
3	2006	6.2	83	0.3	0.7	6.5	2.2	**7**	**25**	**0.3**	0.86
	2012	6.1	169	0.2	0.7	9.5	2.2	**142**	**159**	**0.8**	**1.76**
% change		-2	104	-40	-2	47	-1	**1956**	**543**	**129**	**104**

Samevatting

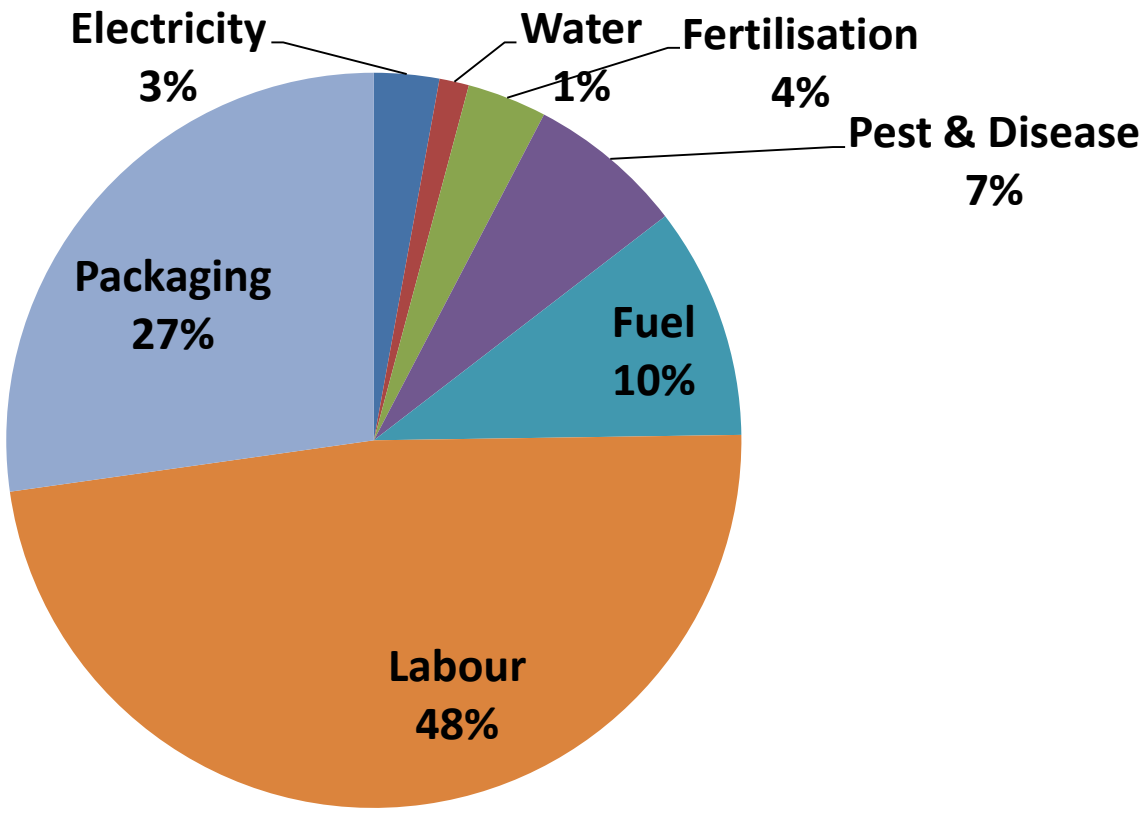
1. Baie groot variasie tussen plase

2. Tendense oor tyd – P, spoorelemente

3. Bemestingspraktyke?

4. Gereelde grondontledings help

Cost breakdown

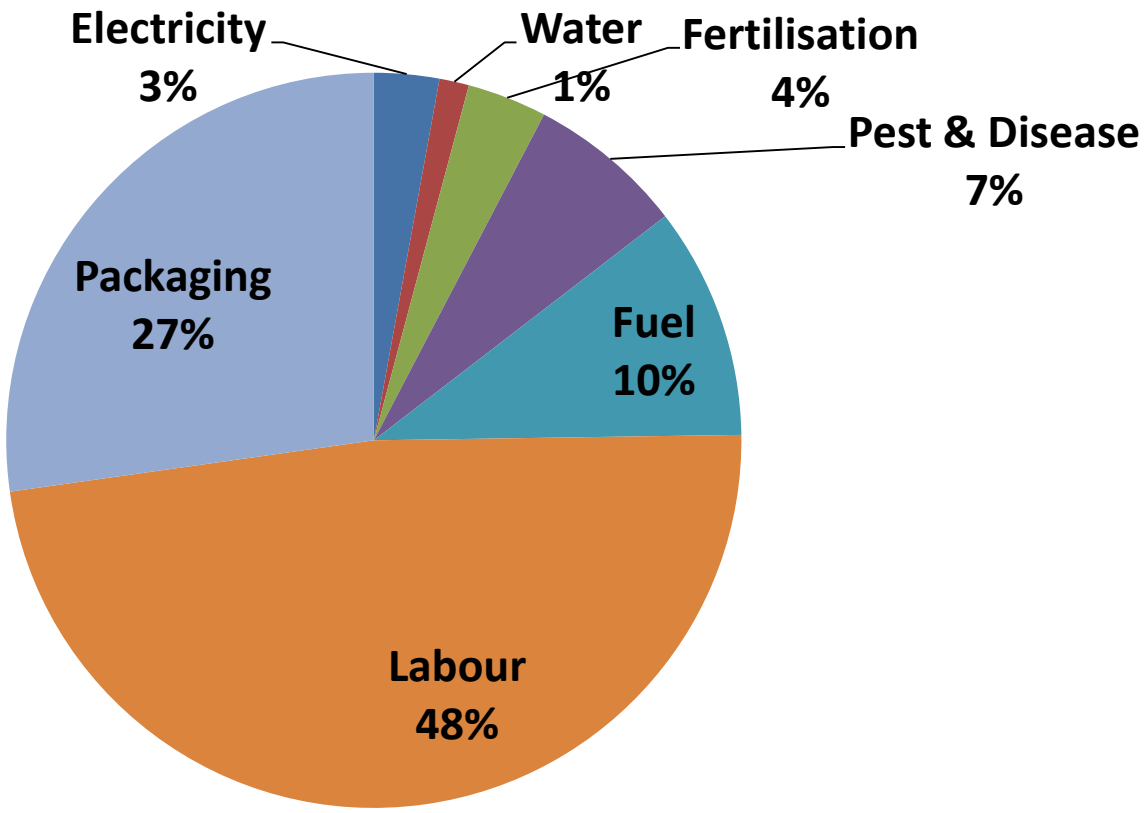


R4500 per ha for Fertilisation

20% saving on this…

R900/ha saving

Cost breakdown



R4500 per ha for Fertilisation

Analyses cost R440/ha for 2 samples every three years

R147,00 per ha = 3.3% of fertilisation cost!!!

www.bemlab.co.za

16 Van der Berg Crescent
Gant's Centre
Strand

Posbus 684
Somerset Mall,
7137

Tel. (021) 853-1490
Faks (021) 853-1423

E-Pos admin@bemlab.co.za

Vat Reg. No. 4200161414

Verslag No.: **GR4551_b** *(Vervang verslag no.: GR004551_a.DOC)*

A. Roos
Worcester Plaas
Posbus 2
De Doorns
6875

Grondontledingsverslag

Datum ontvang: 20/02/2014
Datum ontleed: 21/02/2014

Boord	Lab. No.	Diepte (cm)	Grond	pH (KCl)	Weerst. (Ohm)	H^+ (cmol/kg)	Klip (Vol %)	P Bray II mg/kg	K mg/kg	Uitruilbare katione (cmol(+)/kg) Na	K	Ca	Mg	Cu mg/kg	Zn mg/kg	Mn mg/kg	B mg/kg	Fe mg/kg	C %
Blok 2- Regal	4551	60	Sand	5.4	820	0.50	9	222	167	0.10	0.43	4.09	0.94	14.06	19.3	131.9	0.26	184.29	0.84
Blok 12- Midnight	4552	60	Sand	4.7	2660	0.94	14	127	58	0.06	0.15	2.55	0.52	11.66	8.3	35.6	0.17	250.42	0.61
Blok 16- Flame	4553	60	Sand	4.6	1890	1.19	25	187	111	0.07	0.28	3.56	0.78	14.06	11.4	43.3	0.32	257.98	0.91
Blok 13- Midnight	4554	60	Sand	5.1	1760	0.94	15	209	100	0.06	0.26	4.79	0.78	19.93	18.8	66.0	0.32	182.87	0.84
Metodes[#]				3108	3106	3109		3117		3113	3113	3113	3113	3115	3115	3115	3114		3107

Indien pH > 7.0 is word die Olsen metode(3118) vir die bepaling van P gebruik.
[#]Verwys na BemLab werkinstruksies

Monster toestand: Monsters ontvang in goeie toestand.

Basis Versadiging

Boord No.	Lab. No.	Na %	K %	Ca %	Mg %	T-Waarde cmol/kg
Blok 2- Regal	4551	1.60	7.07	67.53	15.55	6.06
Blok 12- Midnight	4552	1.40	3.50	60.44	12.38	4.22
Blok 16- Flame	4553	1.26	4.82	60.45	13.24	5.88
Blok 13- Midnight	4554	0.86	3.74	70.16	11.46	6.82

www.bemlab.co.za

16 Van der Berg Crescent
Gant's Centre
Strand

Posbus 684
Somerset Mall,
7137

Tel. (021) 853-1490
Faks (021) 853-1423

E-Pos admin@bemlab.co.za

Vat Reg. No. 4200161414

Verslag No.: **GR4551_b** *(Vervang verslag no.: GR004551_a.DOC)*

A. Roos
Worcester Plaas
Posbus 2
De Doorns
6875

Grondontledingsverslag

Datum ontvang: 20/02/2014
Datum ontleed: 21/02/2014

Boord	Lab. No.	Diepte (cm)	Grond	pH (KCl)	Weerst. (Ohm)	H^+ (cmol/kg)	Klip (Vol %)	P Bray II mg/kg	K	Uitruilbare katione (cmol(+)/kg) Na	K	Ca	Mg	Cu	Zn mg/kg	Mn	B	Fe mg/kg	C %
Blok 2- Regal	4551	60	Sand	5.4	820	0.50	9	222	167	0.10	0.43	4.09	0.94	14.06	9.3	131.9	0.26	184.29	0.84
Blok 12- Midnight	4552	60	Sand	4.7	2660	0.94	14	127	58	0.06	0.15	2.55	0.52	11.66	8.3	35.6	0.17	250.42	0.61
Blok 16- Flame	4553	60	Sand	4.6	1890	1.19	25	187	111	0.07	0.28	3.56	0.78	14.06	11.1	42.3	0.32	257.98	0.91
Blok 13- Midnight	4554	60	Sand	5.1	1760	0.94	15	209	100	0.06	0.26	4.79	0.78	19.93	18.8	66.0	0.32	182.87	0.84
Metodes#				3108	3106	3109		3117		3113	3113	3113	3113	3115	3115	3115	3114		3107

Indien pH > 7.0 is word die Olsen metode(3118) vir die bepaling van P gebruik.
#Verwys na BemLab werkinstruksies

Monster toestand: Monsters ontvang in goeie toestand.

Basis Versadiging

Boord No.	Lab. No.	Na %	K %	Ca %	Mg %	T-Waarde cmol/kg
Blok 2- Regal	4551	1.60	7.07	67.53	15.55	6.06
Blok 12- Midnight	4552	1.40	3.50	60.44	12.38	4.22
Blok 16- Flame	4553	1.26	4.82	60.45	13.24	5.88
Blok 13- Midnight	4554	0.86	3.74	70.16	11.46	6.82

Om ‘n voorspoedige toekoms vir ons almal te verseker,

help Bemlab sy kliënte om die regte besluite te neem

Baie dankie

Enige vrae?

bemlab

deel van die PathCare groep van maatskappye