



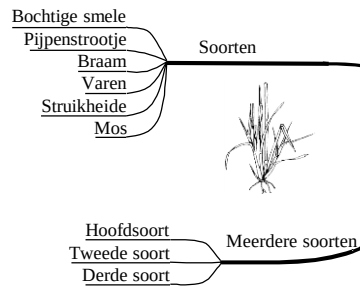
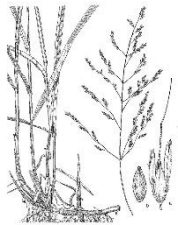
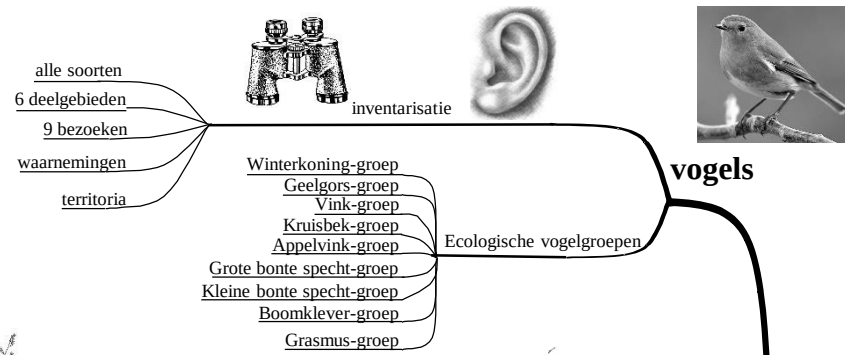
Bosvogels op microniveau

Jan Kolsters

Correlaties en oorzaken



Opzet van het onderzoek



Kruidlaag

Buikheide
350 ha

2001, 2006, 2011

Struiklaag

- 0 (helemaal geen struiken)
- 0-25% bedekking
- 25-50% bedekking
- 50-75% bedekking
- 75-100% bedekking

Kroonlaag

- 0 (volledig gesloten)
- 0-25% open
- 25-50% open
- 50-75% open
- 75-100% open

Bomen



Monocultures

Dennen

- Grove den
- Corsicaanse den
- Oostenrijkse den
- Weymouthden

Sparren

- Douglas
- Fijnspar
- Servische spar
- Sitka spar
- Canadese hemlocksp
- Reuzenzilverpar

Lariks

- Japanse lariks
- Europese lariks

Loof

- Amerikaanse eik
- Zomereik
- Ruwe berk
- Beuk



Gemengd

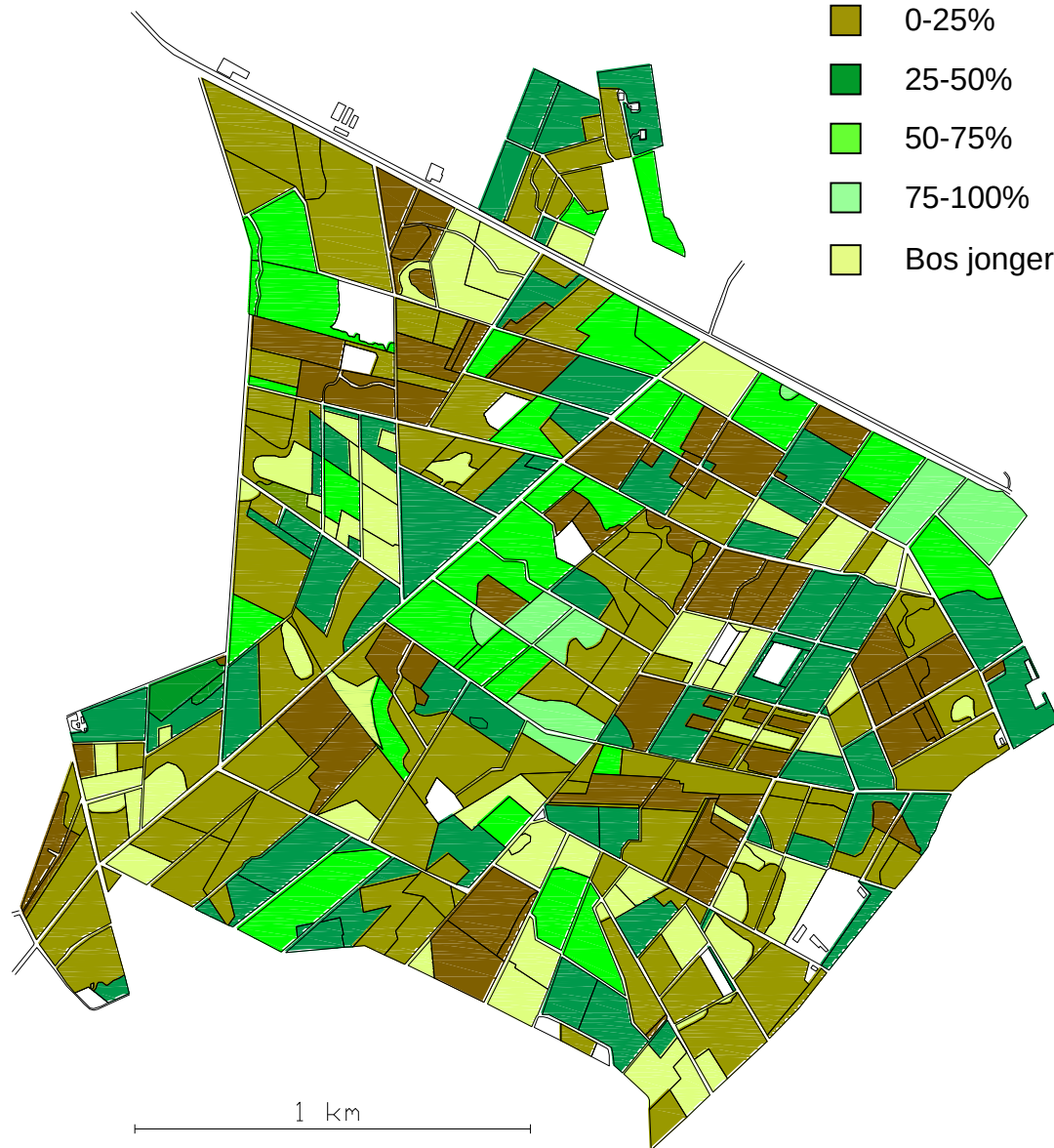
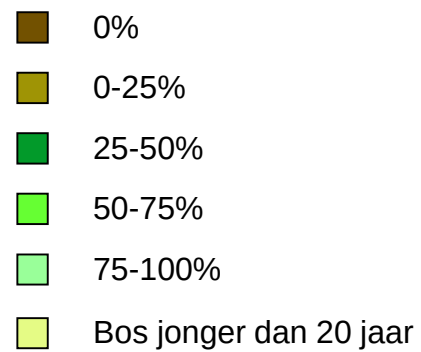
- Hoofdboomsoort
- Tweede soort
- Derde soort
- Vierde soort

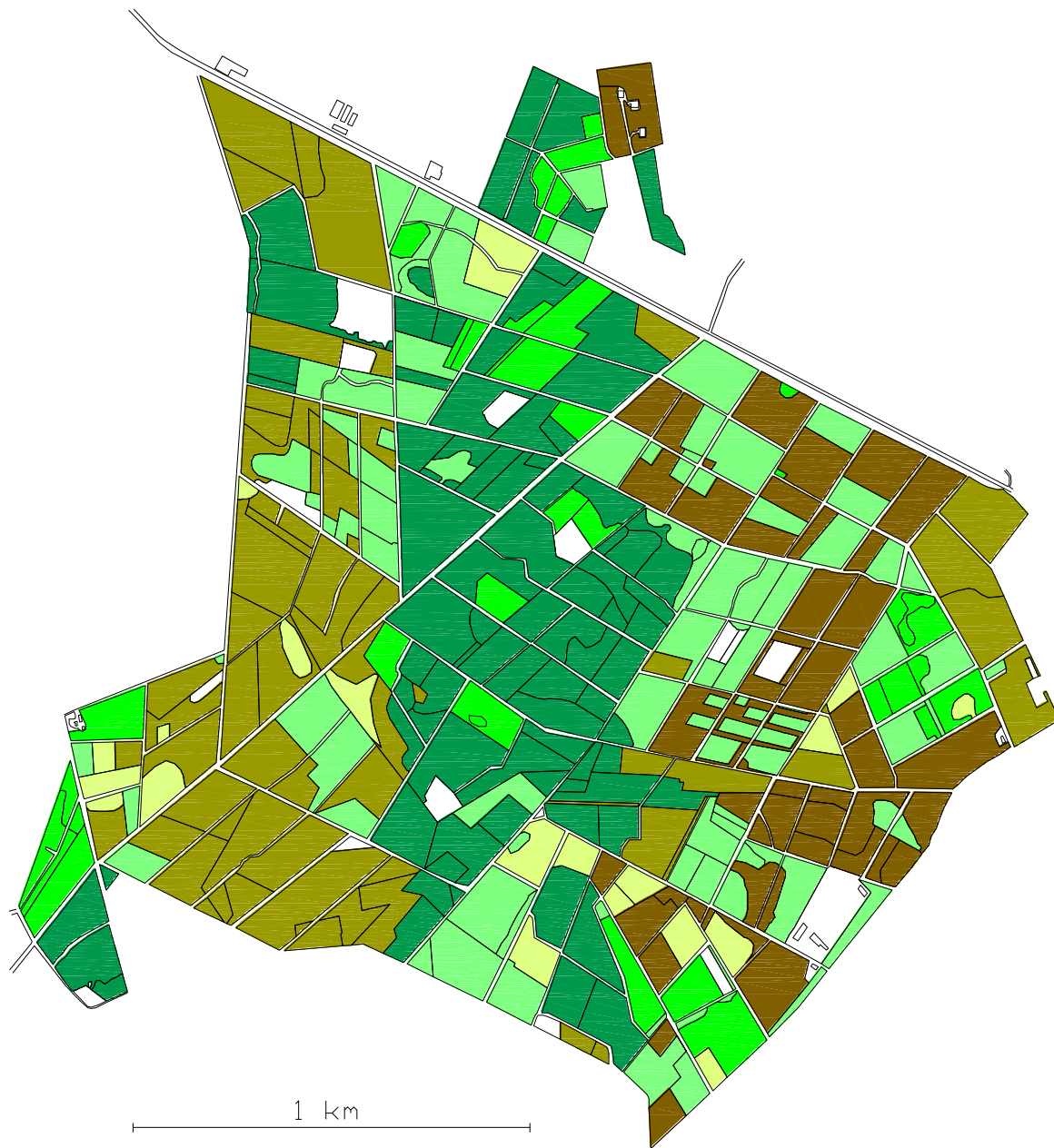
Leeftijd

- Per 15 jaar
- Per 20 jaar



struiklaagbedekking

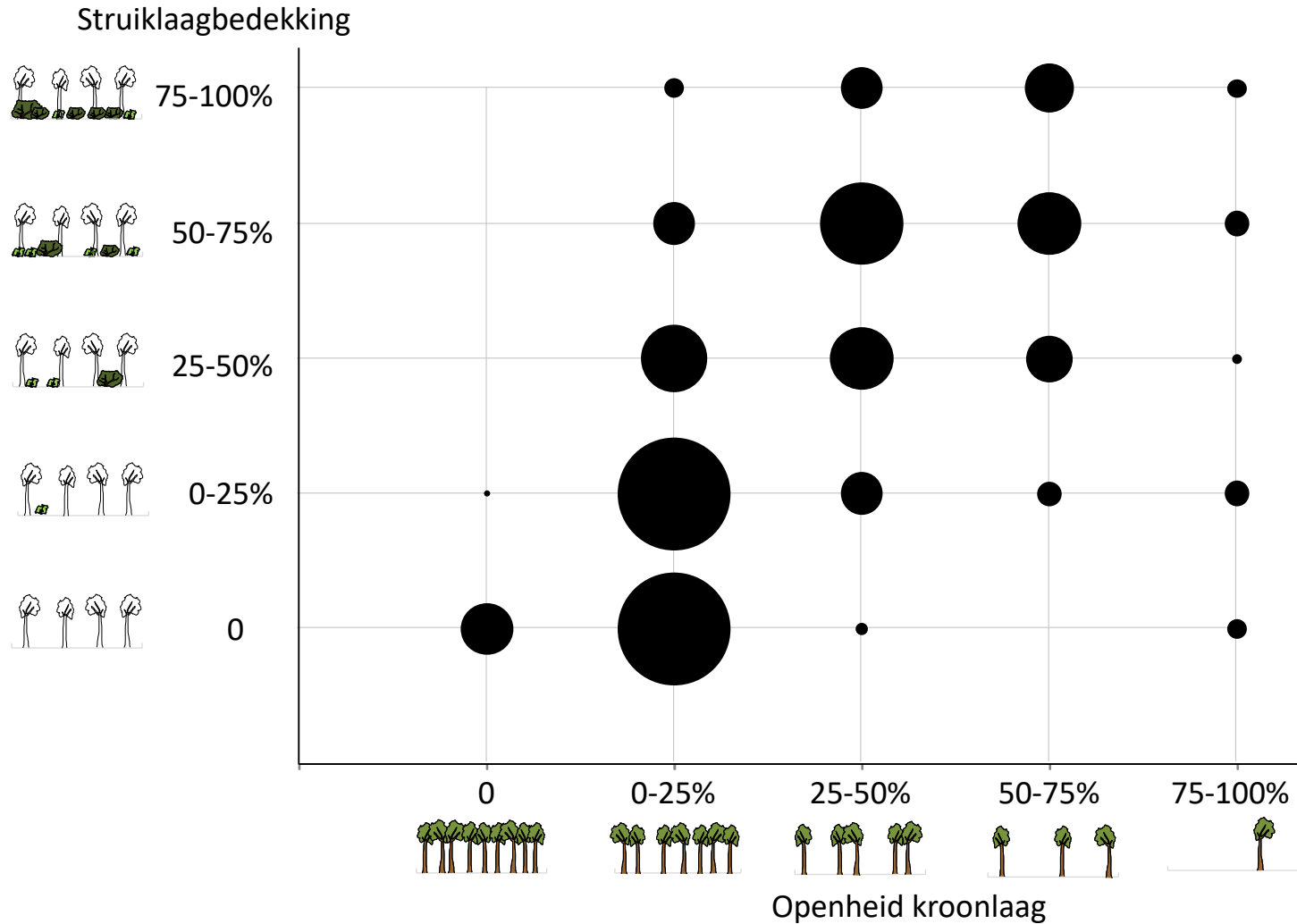




Leeftijd

- Geen bos
- 0-15 jaar
- 15-30 jaar
- 30-45 jaar
- 45-60 jaar
- 60-75 jaar
- >75 jaar

Opbouw van het bos

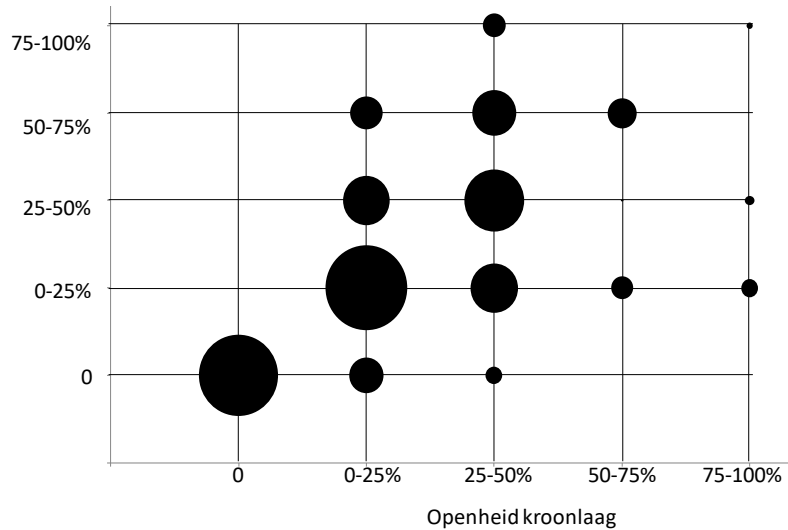


relatie openheid van kroonlaag en struiklaagbedekking

Opbouw 2006 en 2011

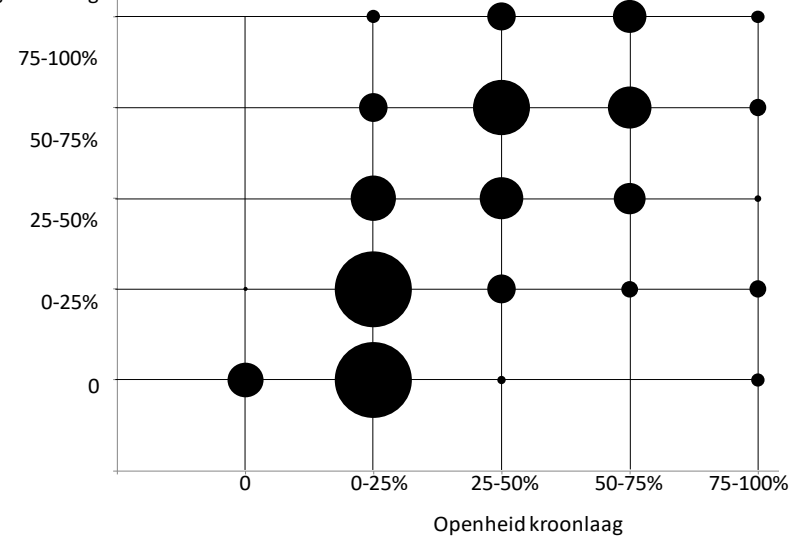
2006

Struiklaagbedekking



2011

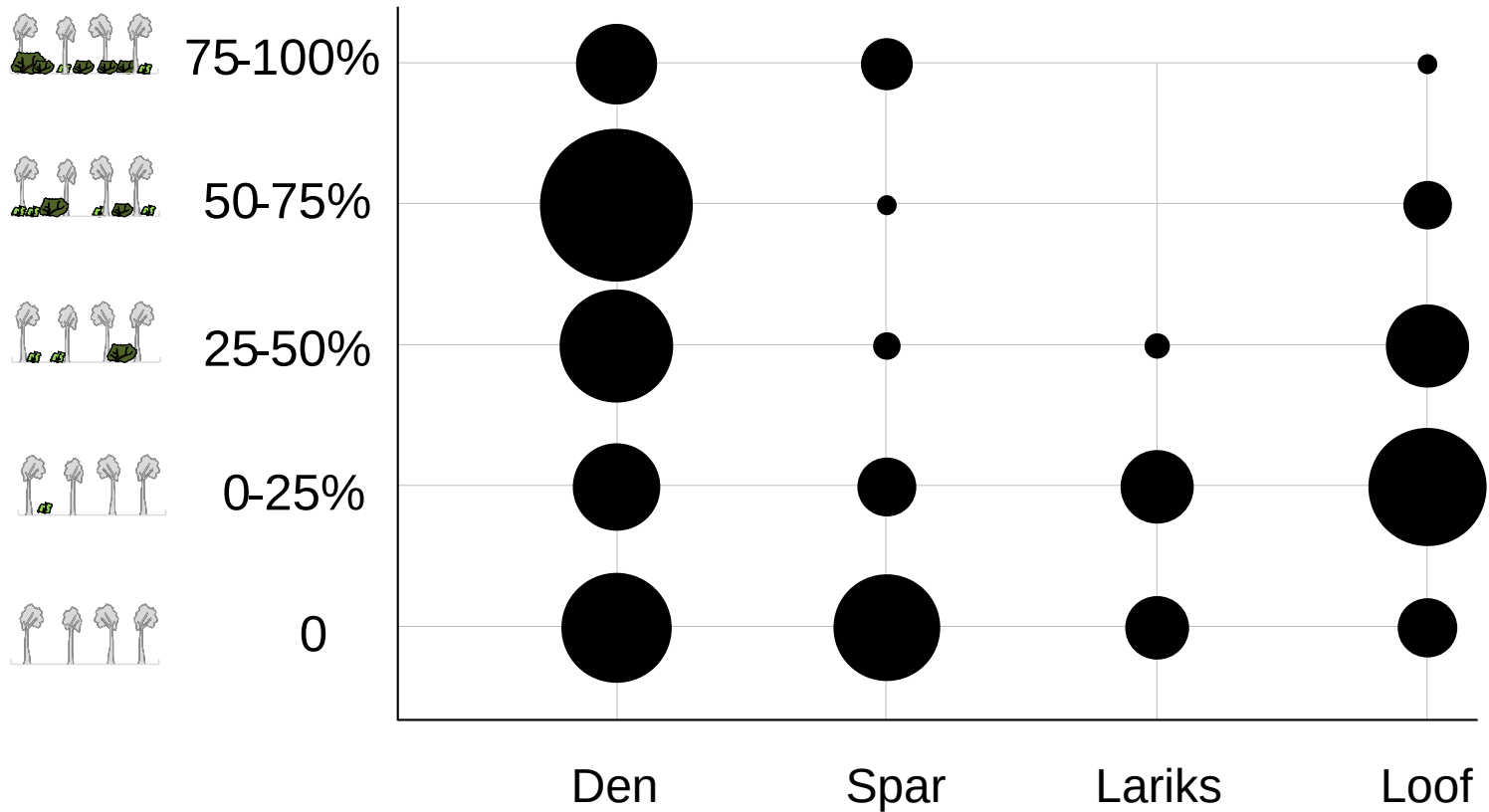
Struiklaagbedekking



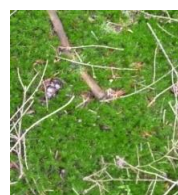
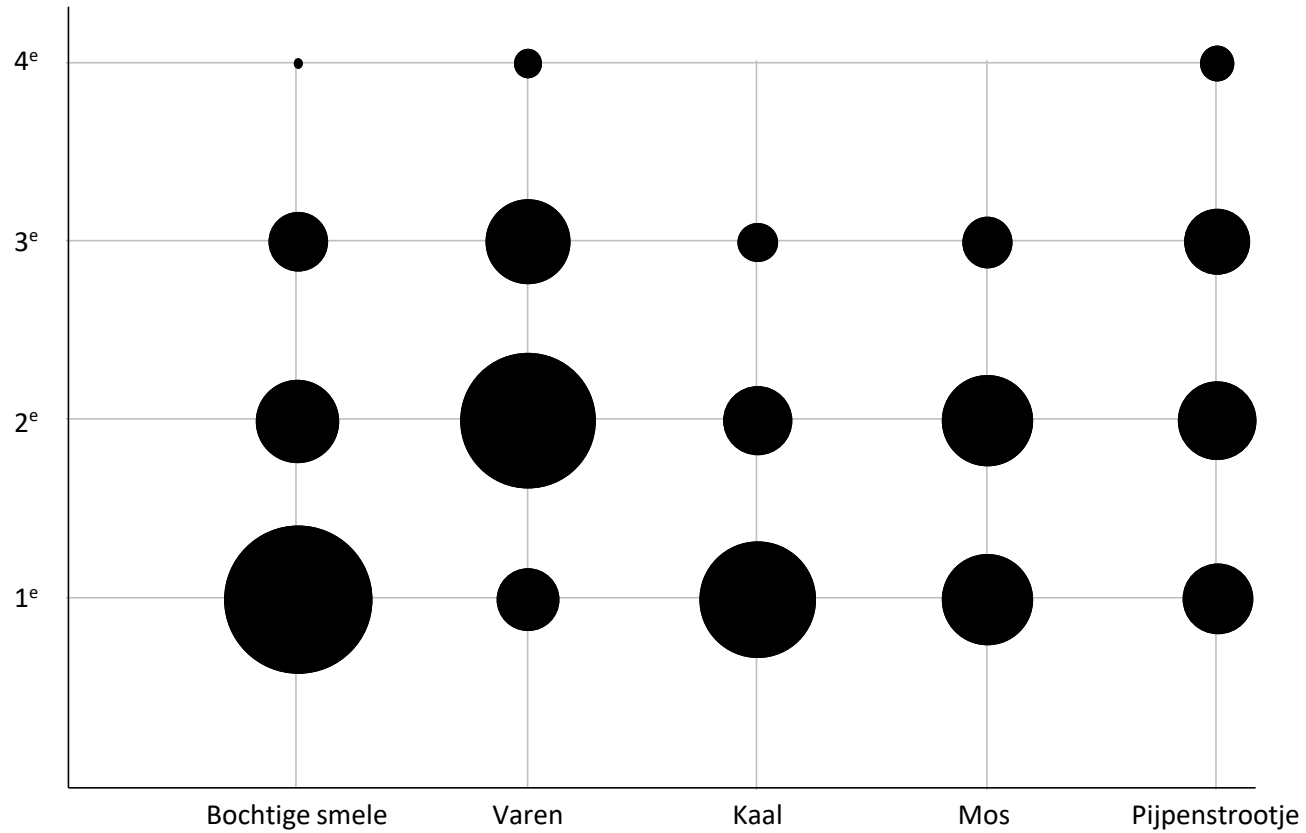
2011 meer open en meer struiken

Opbouw van het bos

struiklaagbedekking



Kruidlaag



Vogelwaarnemingen

territoria

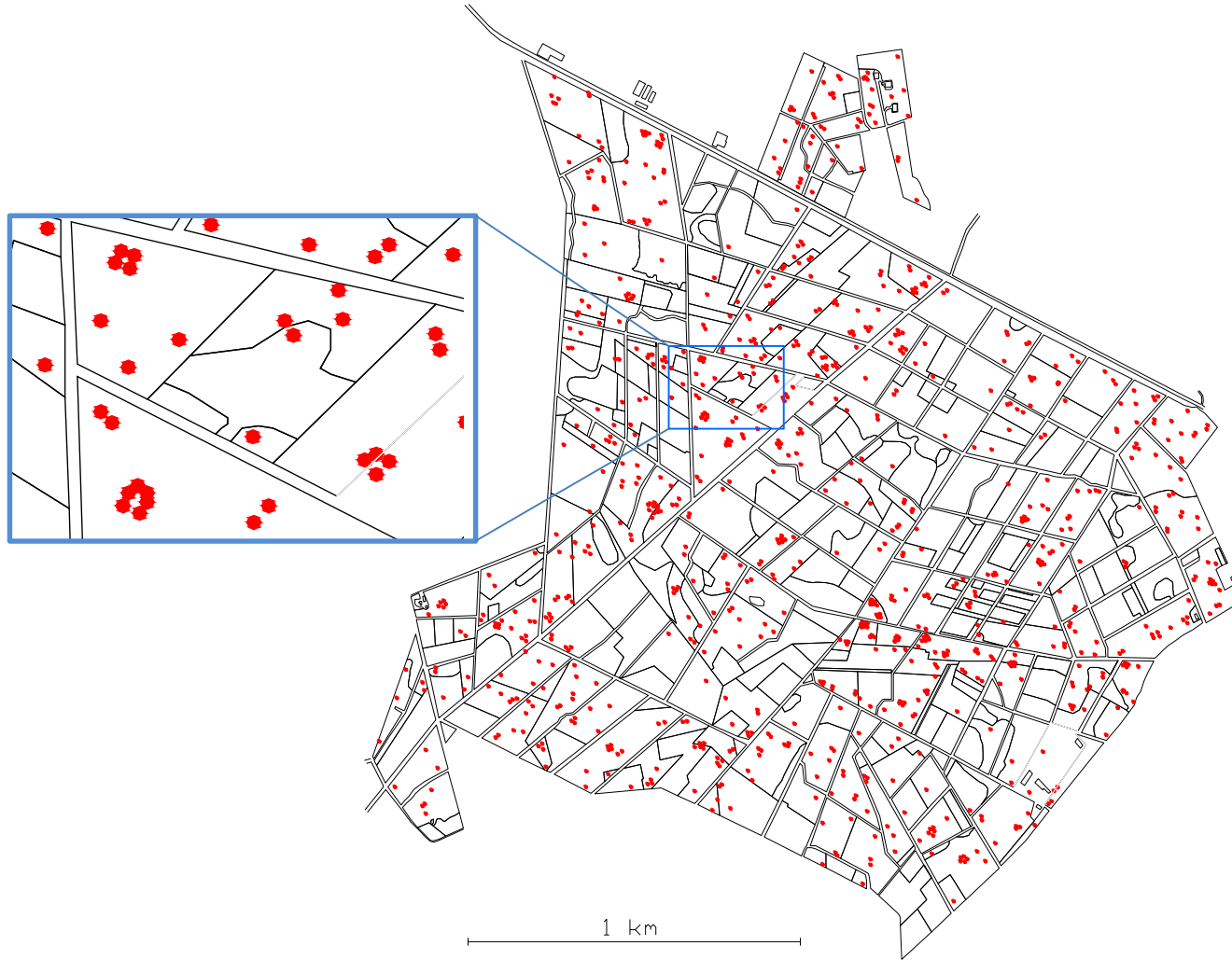


waarnemingen



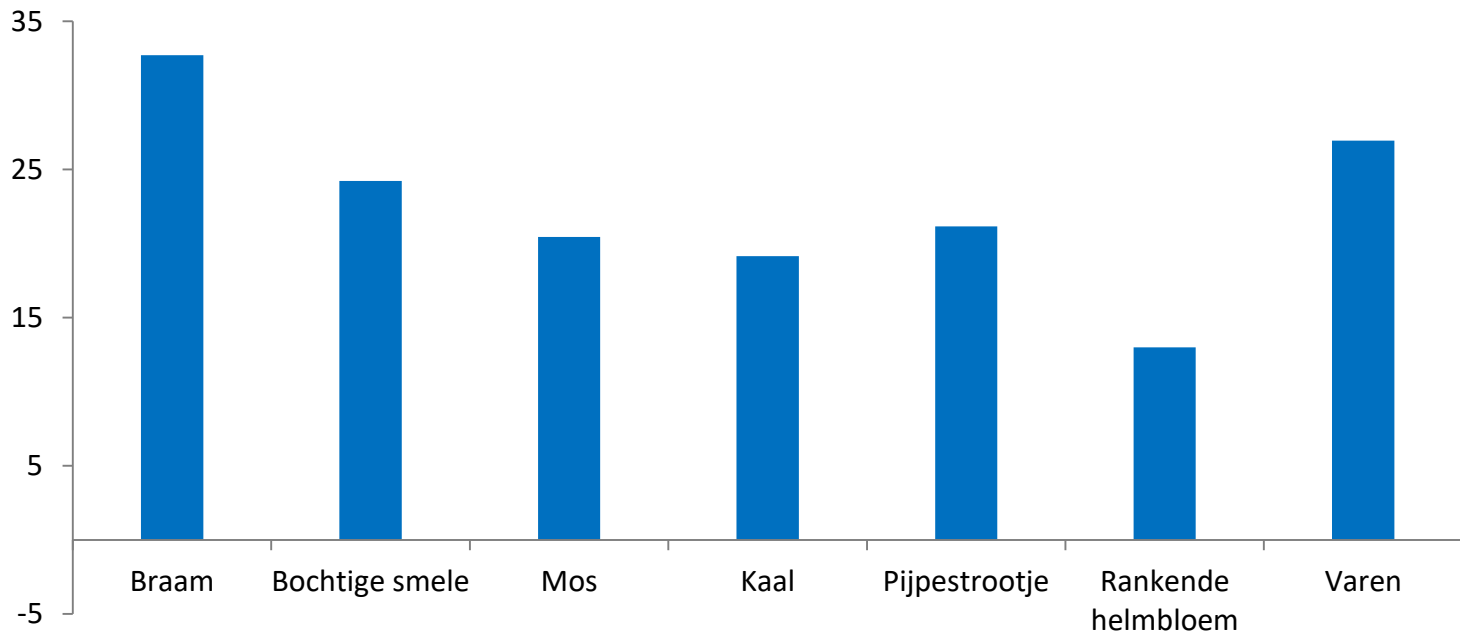
Waarnemingen: zuiver en geen verlies

Waarnemingen winterkoning



Kruidlaag

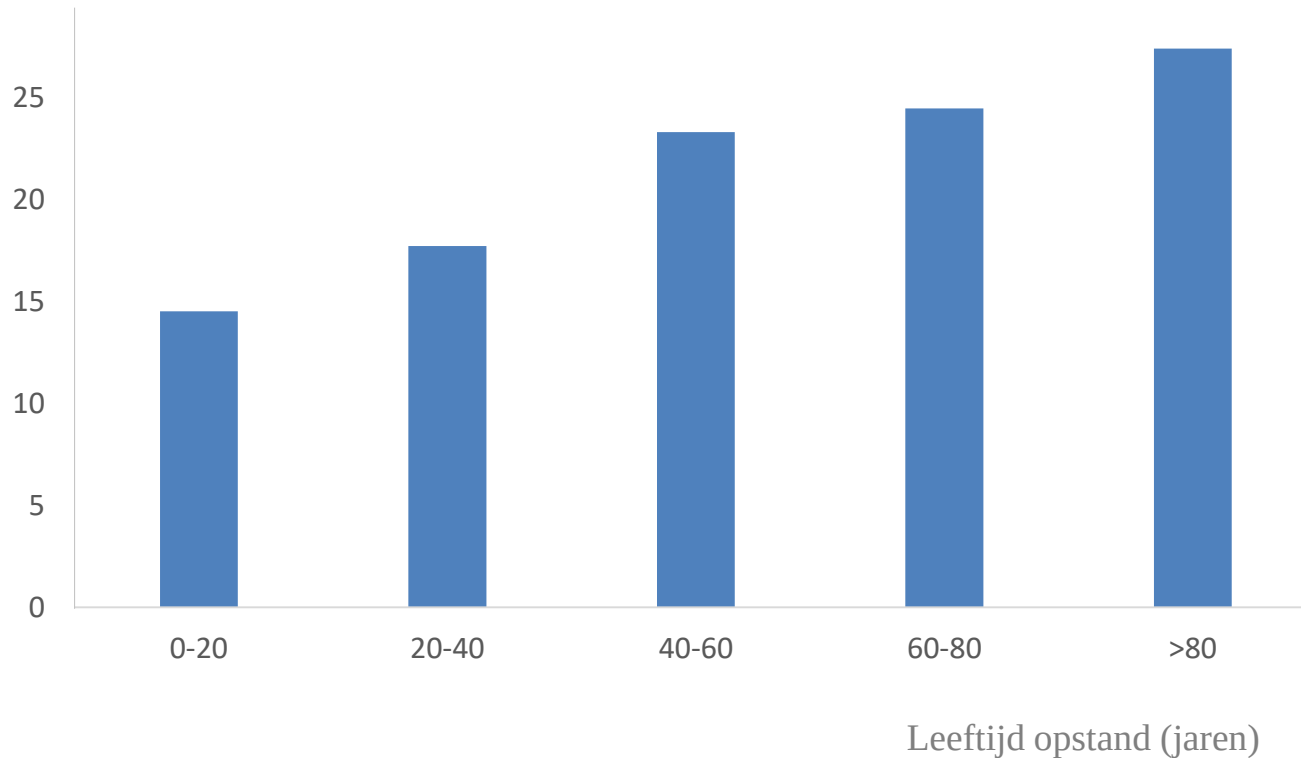
Waarnemingen/10 ha



Hoogste dichtheden bij Braam en Varen

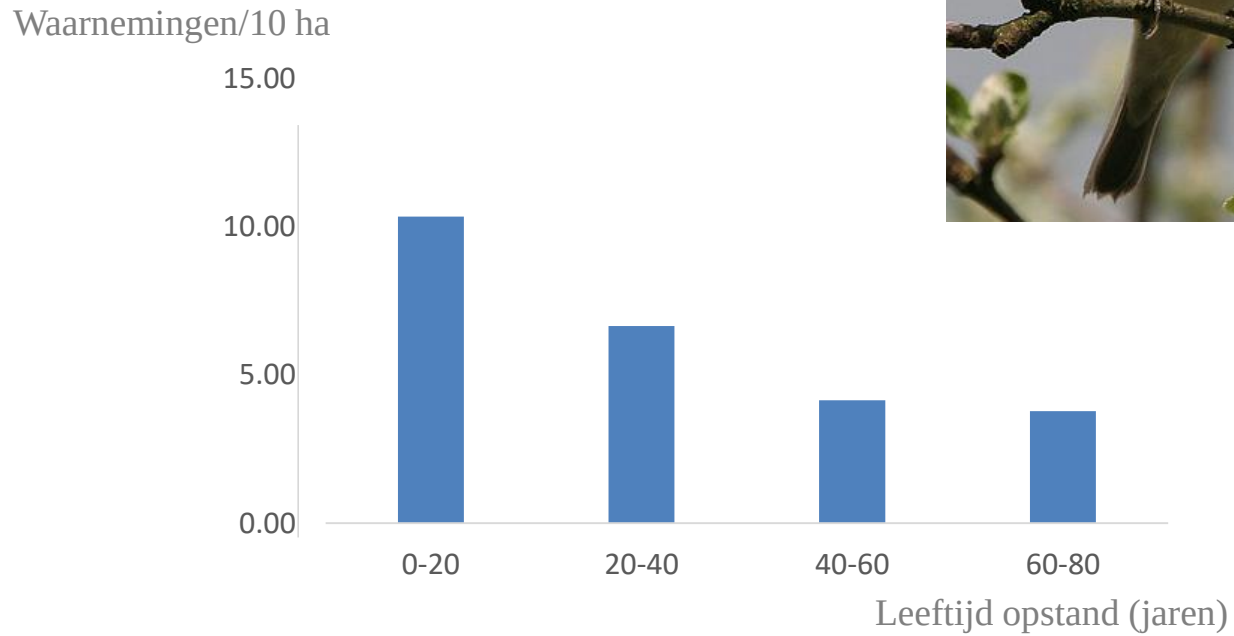
Leeftijd opstand

Waarnemingen/10 ha



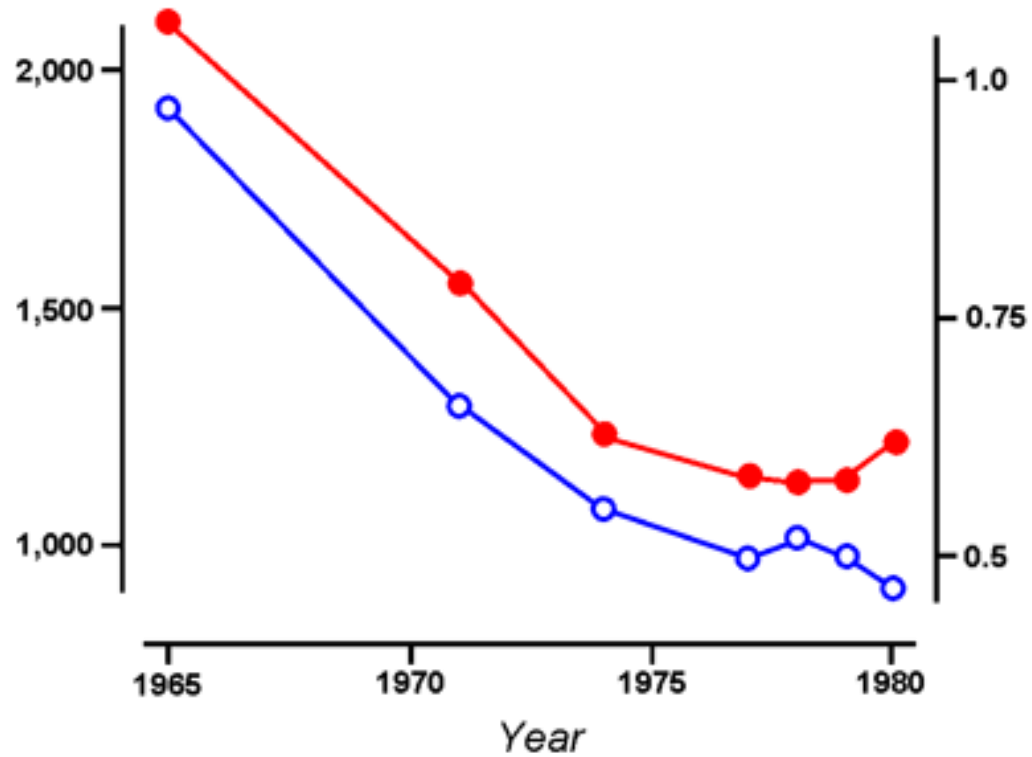
Meer vogels in oude percelen

zwartkop



Correlatie met leeftijd opstand

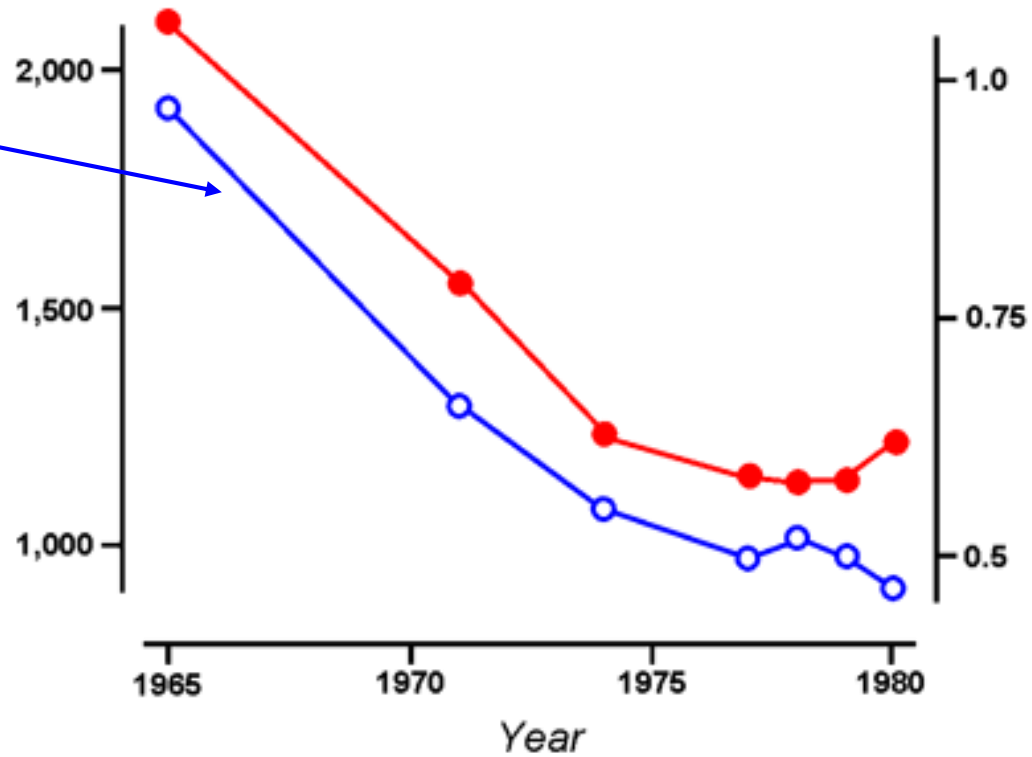
Correlatie



Source: Helmut Sies (1988): A new parameter for sex education. *Nature*, 332, 495.

Correlatie?

Broedparen Ooievaar



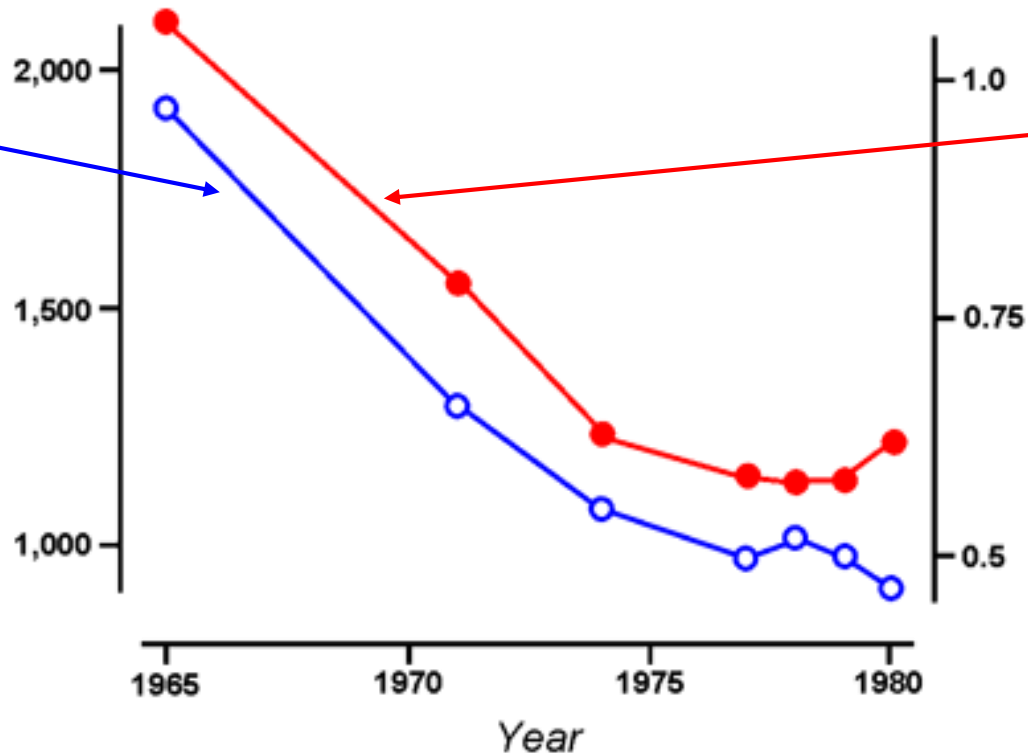
Source: Helmut Sies (1988): A new parameter for sex education. Nature, 332, 495.

Toevallige correlatie

Broedparen Ooievaar



Aantal baby's geboren (x1miljoen)



Source: Helmut Sies (1988): A new parameter for sex education. Nature, 332, 495.

zwartkop

Waarnemingen/10 ha

15

10

5

0

0-20

20-40

40-60

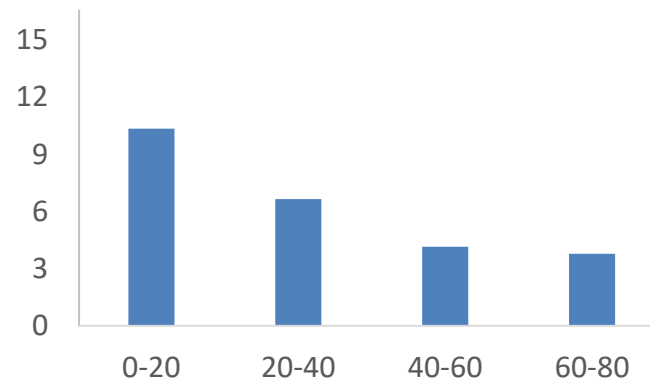
60-80

Leeftijd opstand (jaren)

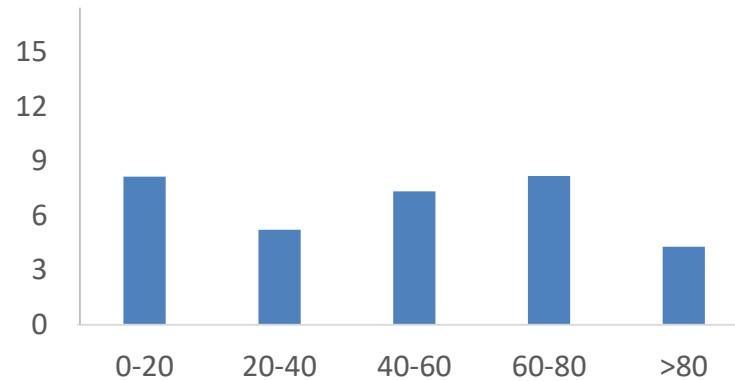


Correlatie met leeftijd opstand

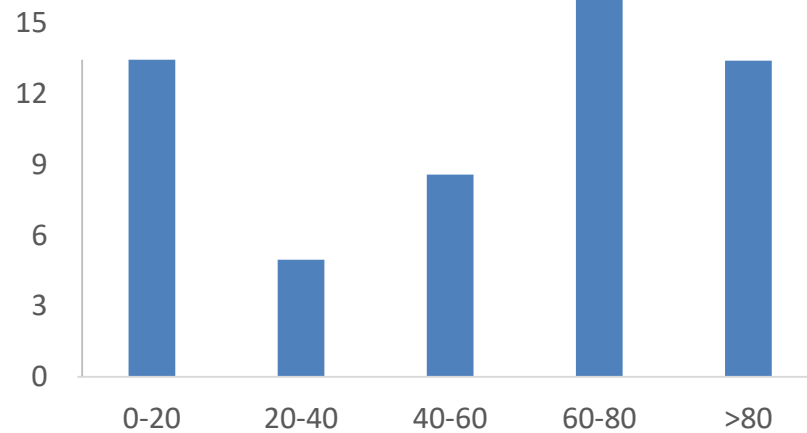
zwartkop



2001



2006



2011

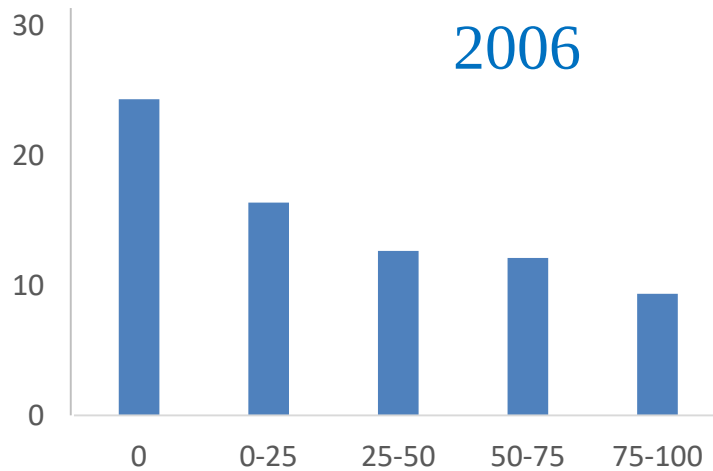
Correlatie in 2001
Bleek toeval



Houtduif

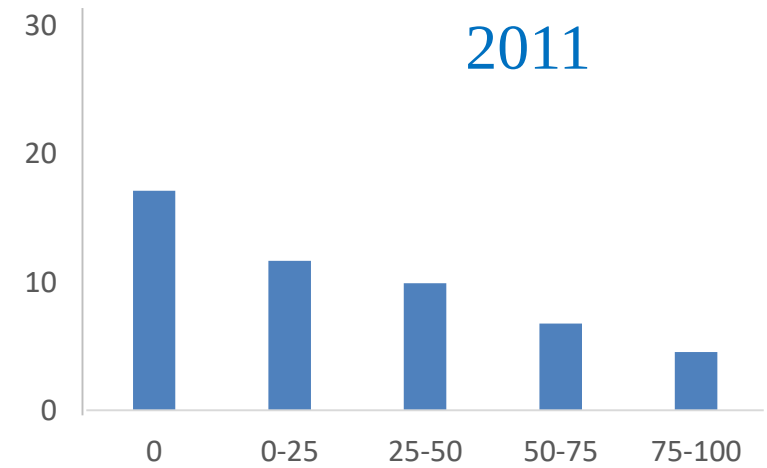


Waarnemingen/10 ha



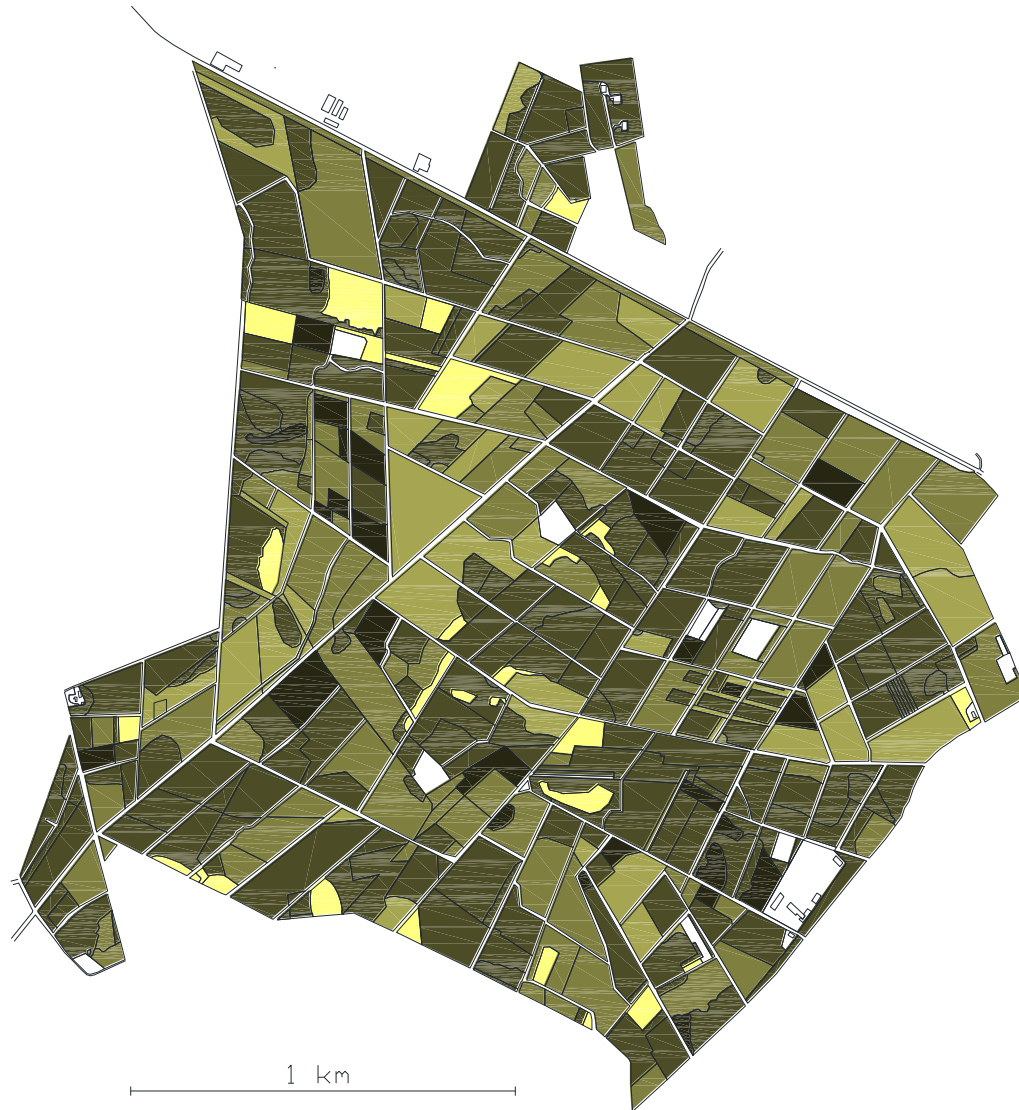
Openheid kroonlaag in %

Waarnemingen/10 ha



Openheid kroonlaag in %

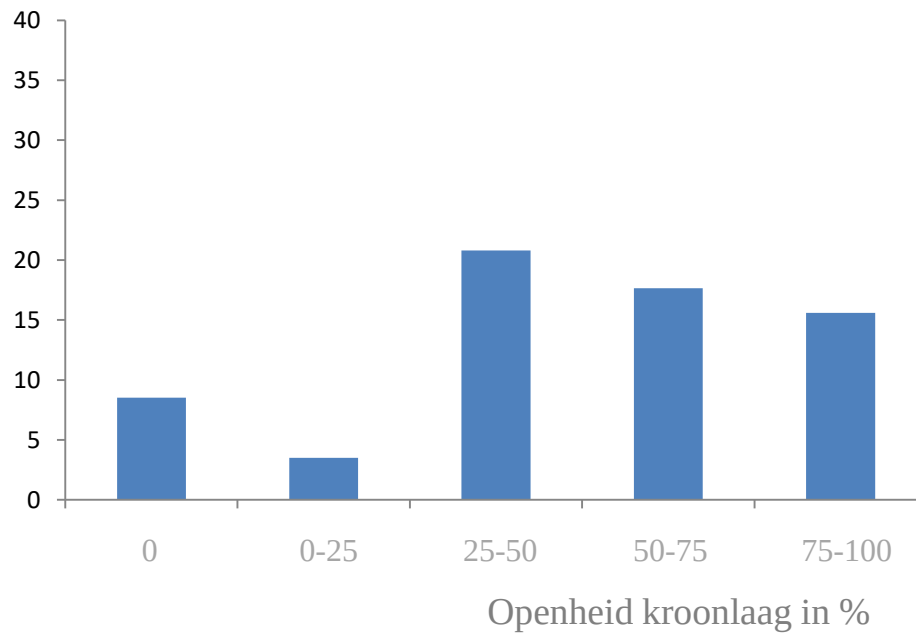
Kroonlaagbedekking



Donker is meer gesloten

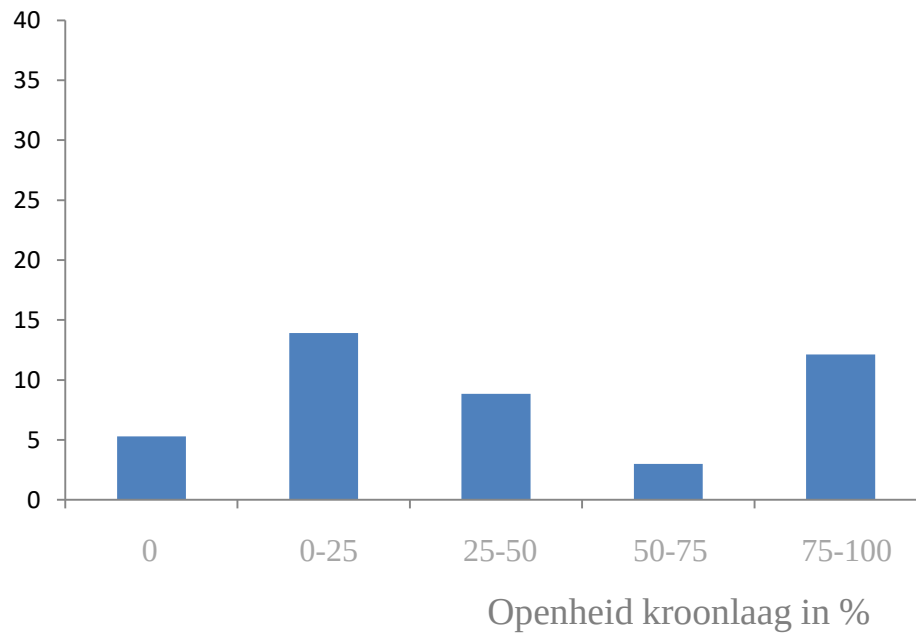
Simulatie 1

Waarnemingen/10 ha



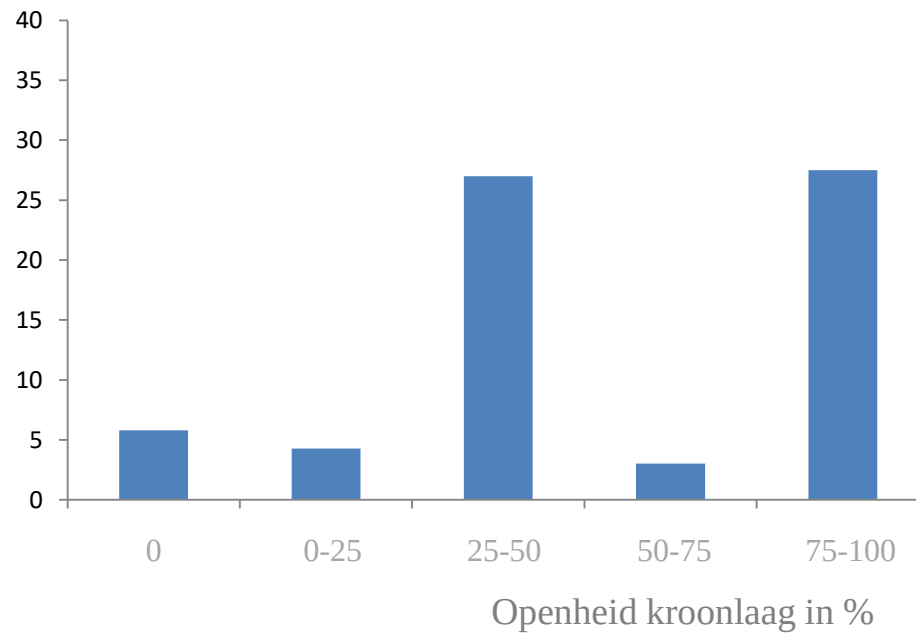
Simulatie 2

Waarnemingen/10 ha



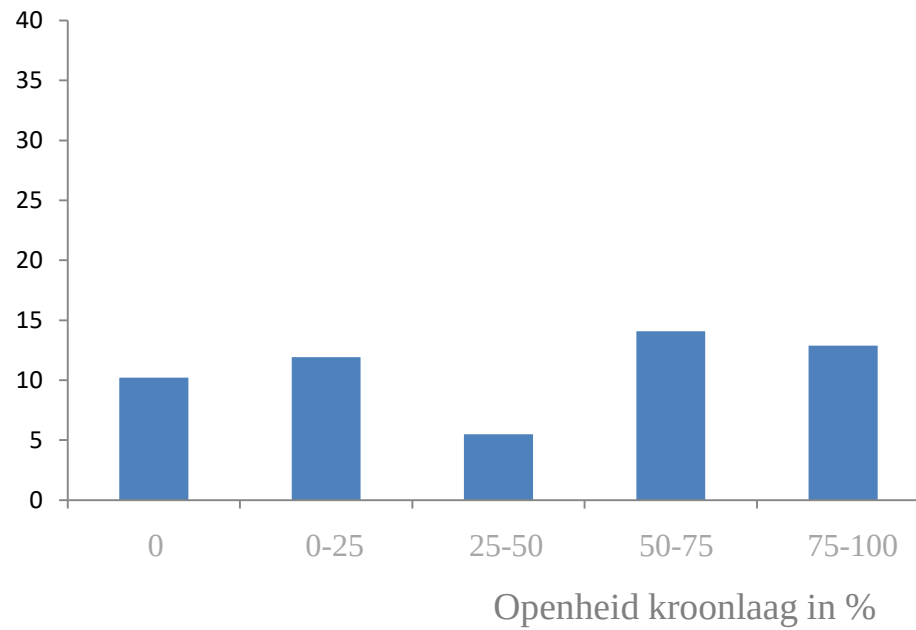
Simulatie 3

Waarnemingen/10 ha



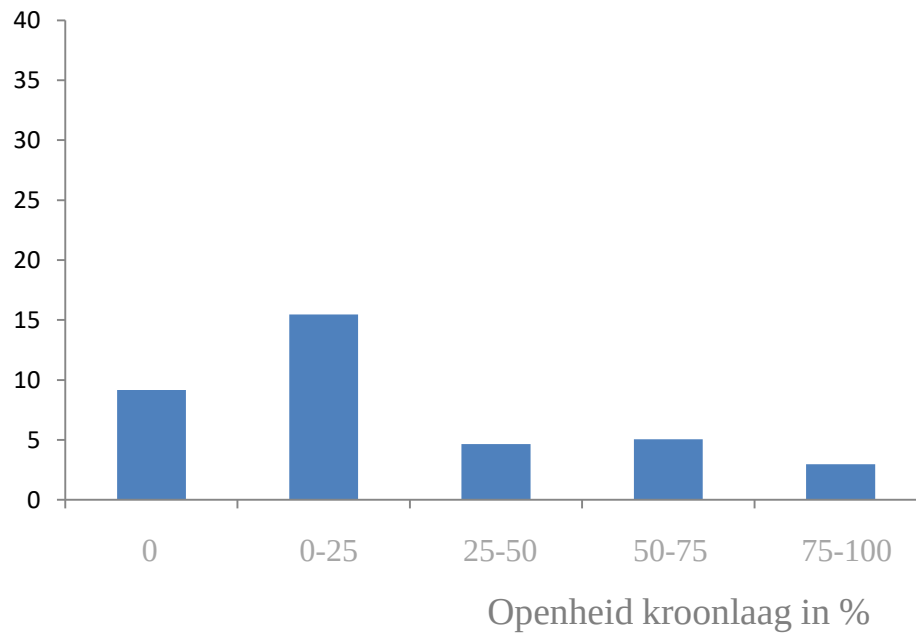
Simulatie 4

Waarnemingen/10 ha



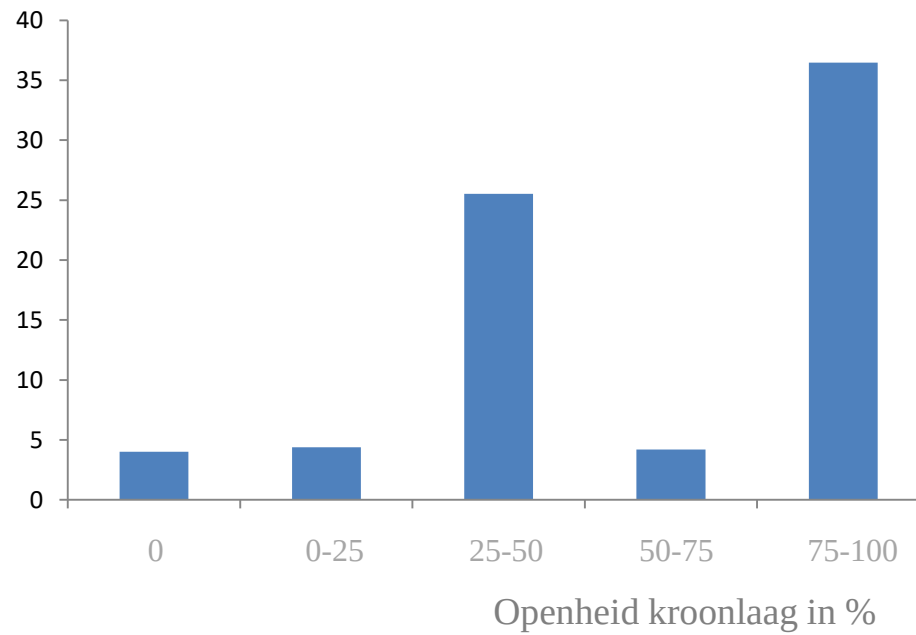
Simulatie 5

Waarnemingen/10 ha



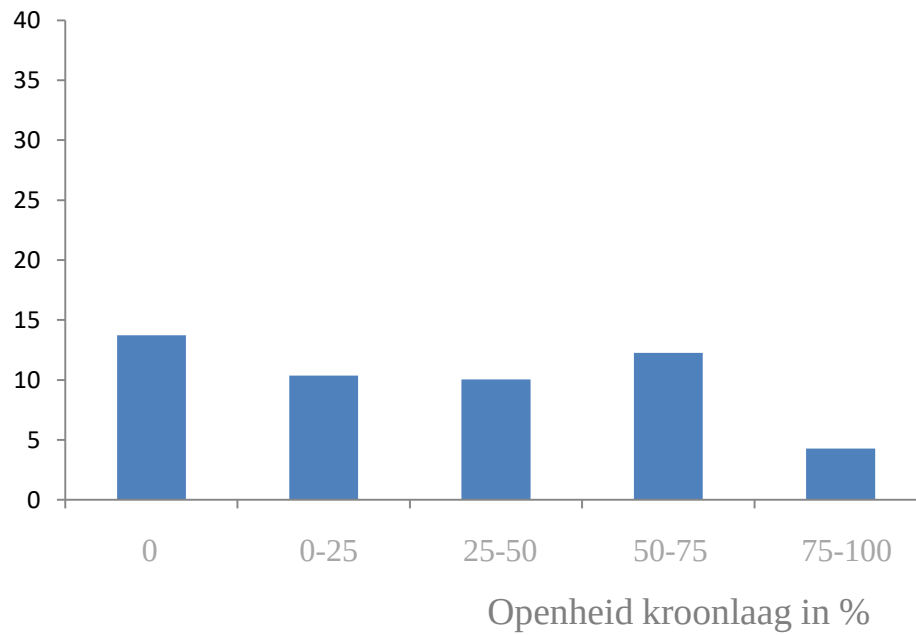
Simulatie 6

Waarnemingen/10 ha



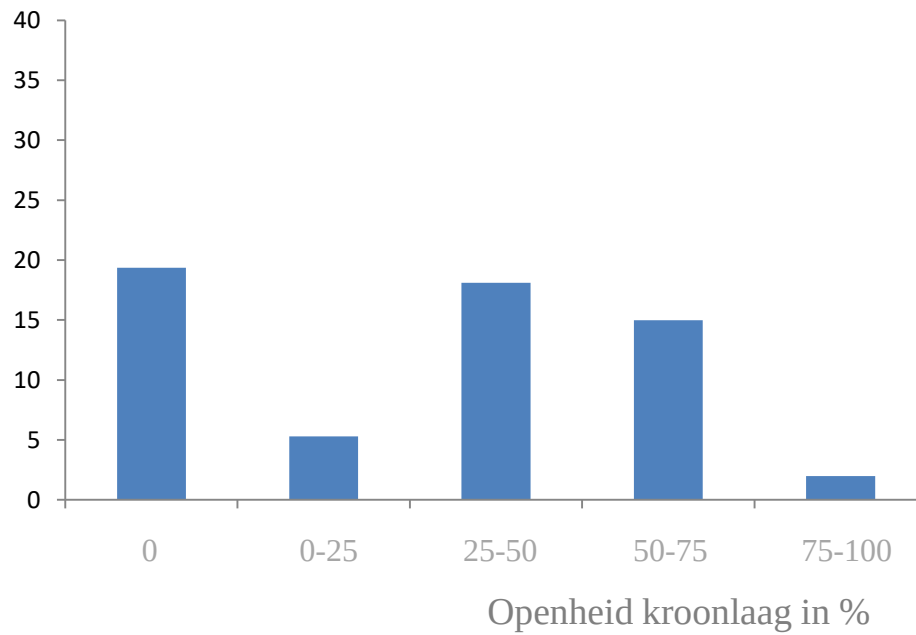
Simulatie 7

Waarnemingen/10 ha



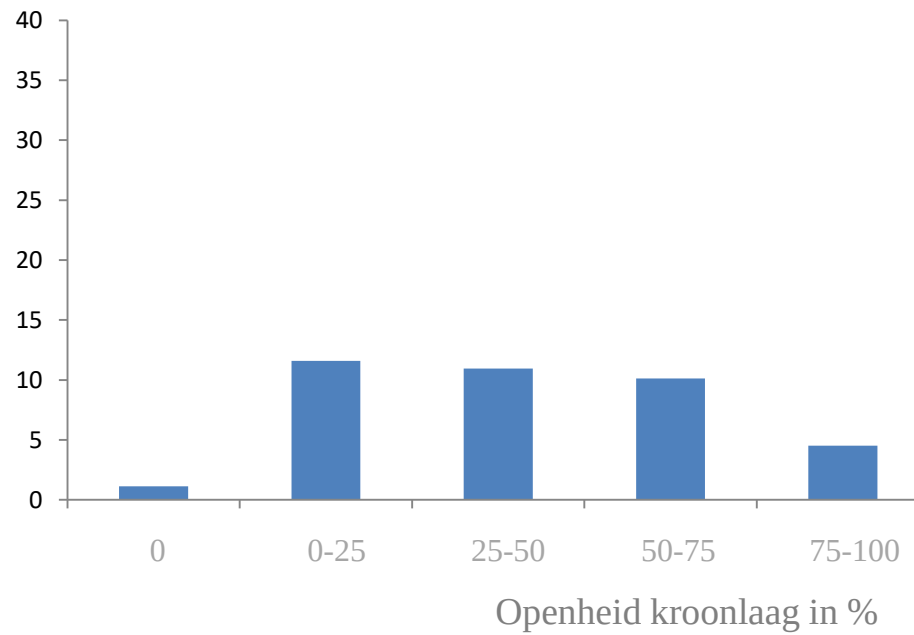
Simulatie 8

Waarnemingen/10 ha



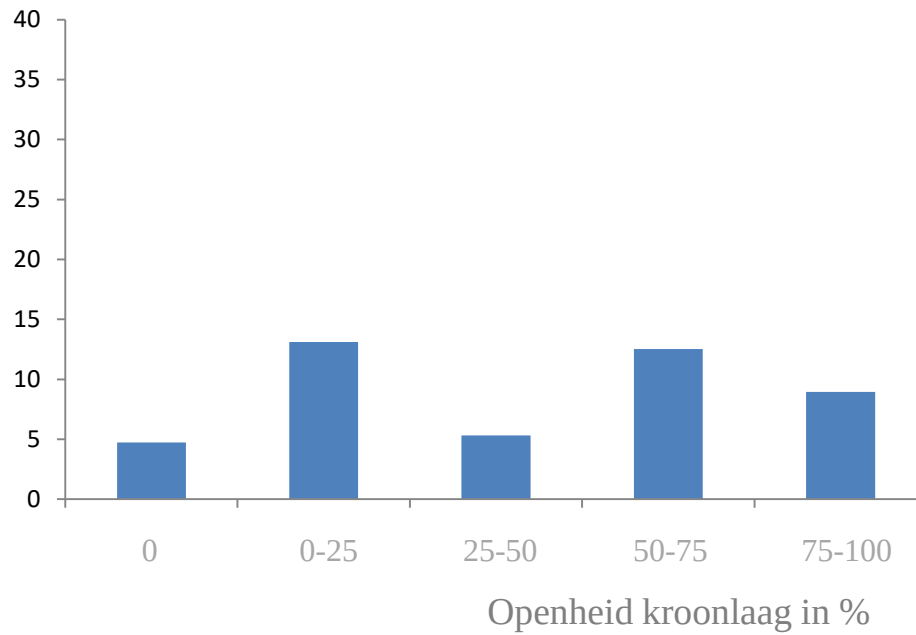
Simulatie 9

Waarnemingen/10 ha



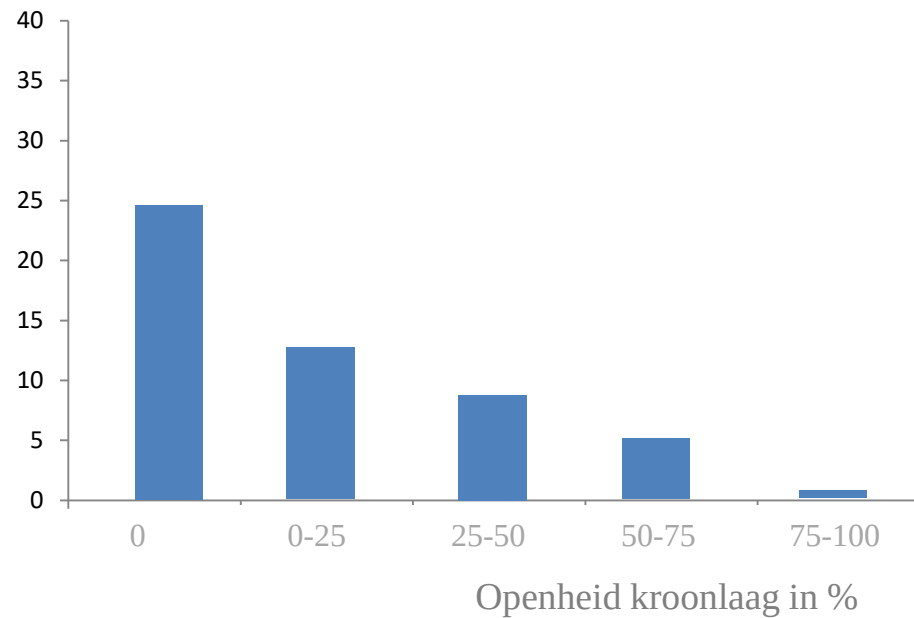
Simulatie 10

Waarnemingen/10 ha



Na 452 keer.....

Waarnemingen/10 ha

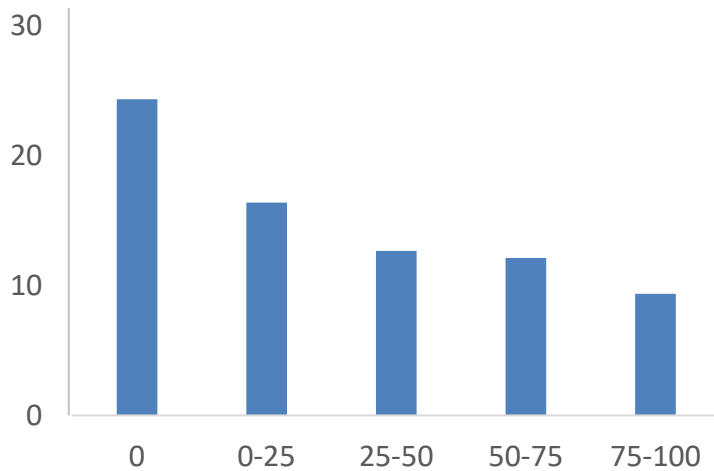


eindelijk

Houtduif

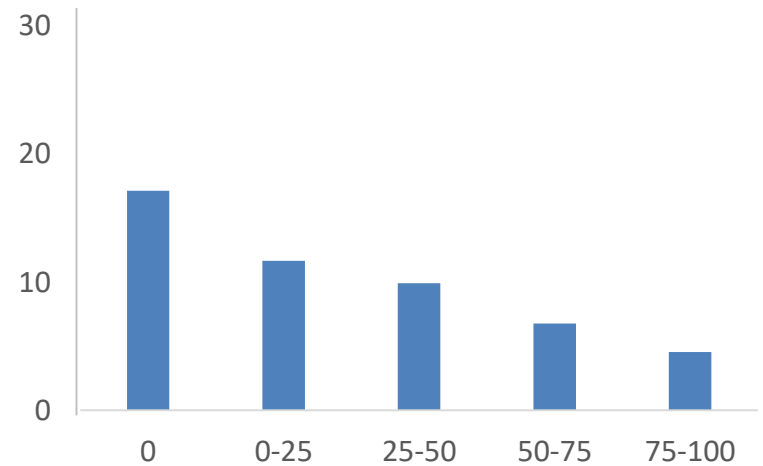


Waarnemingen/10 ha



Openheid kroonlaag in %

Waarnemingen/10 ha

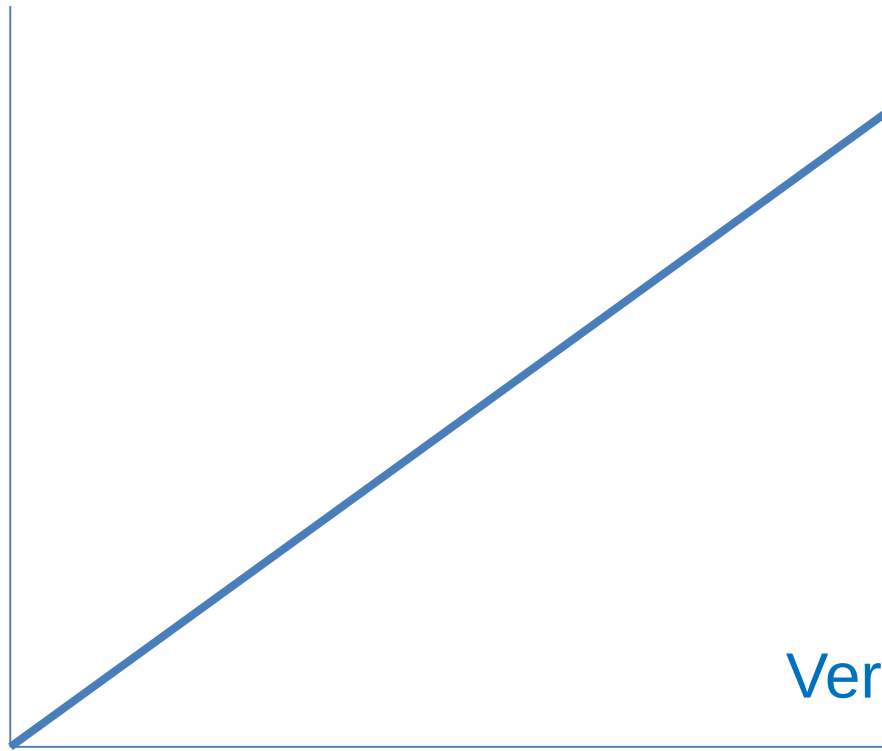


Openheid kroonlaag in %

Systematische correlatie

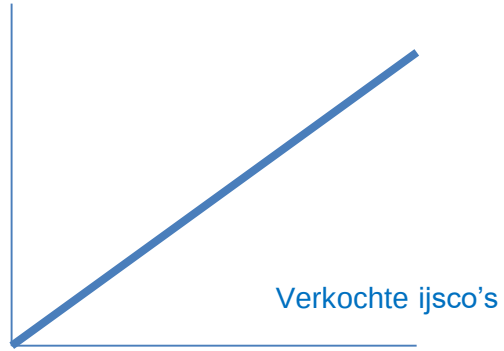
Systematische correlatie

Aantal verdrinkingen

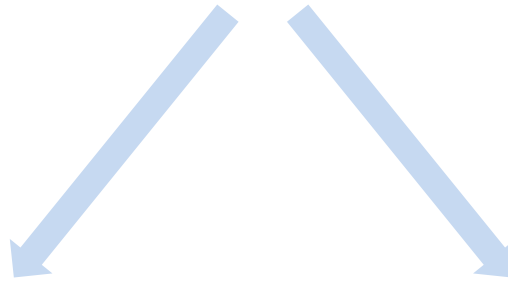


Verkochte ijsco's

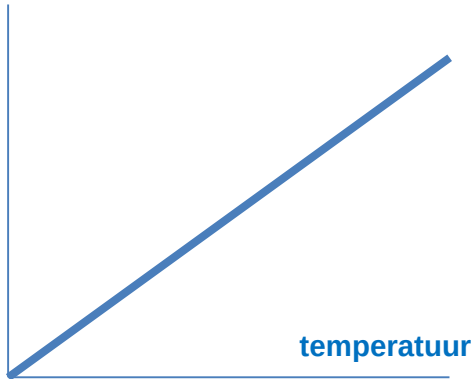
Aantal verdrinkingen



Verkochte ijSCO's

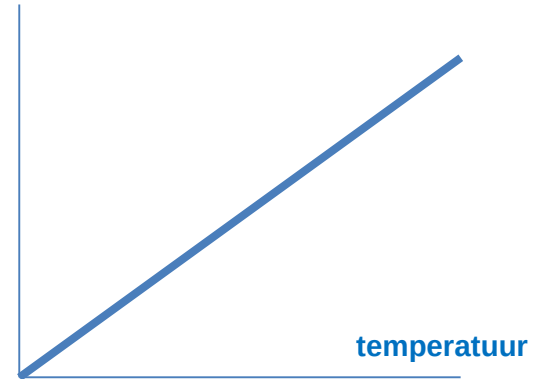


Verkochte ijSCO's



temperatuur

Aantal verdrinkingen

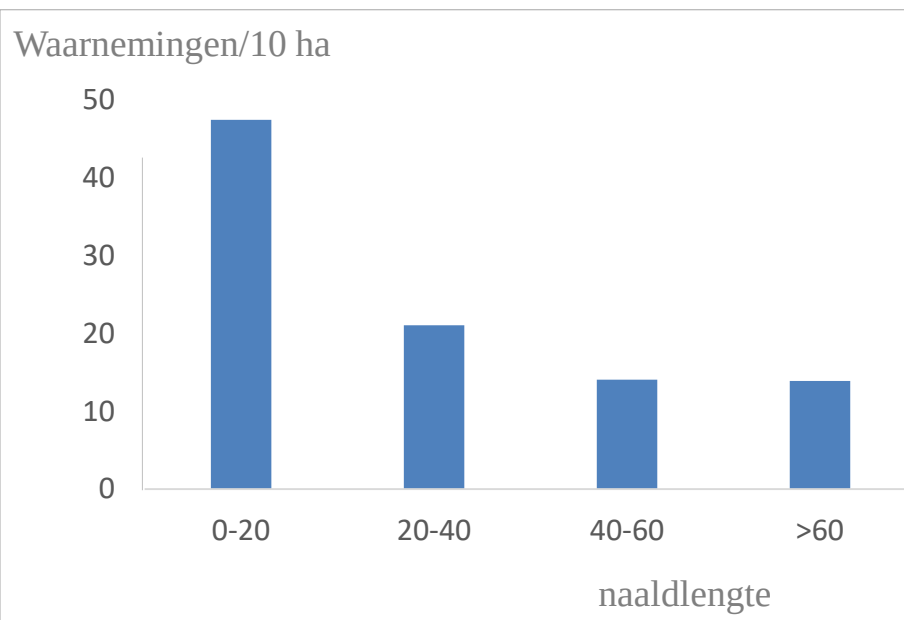


temperatuur

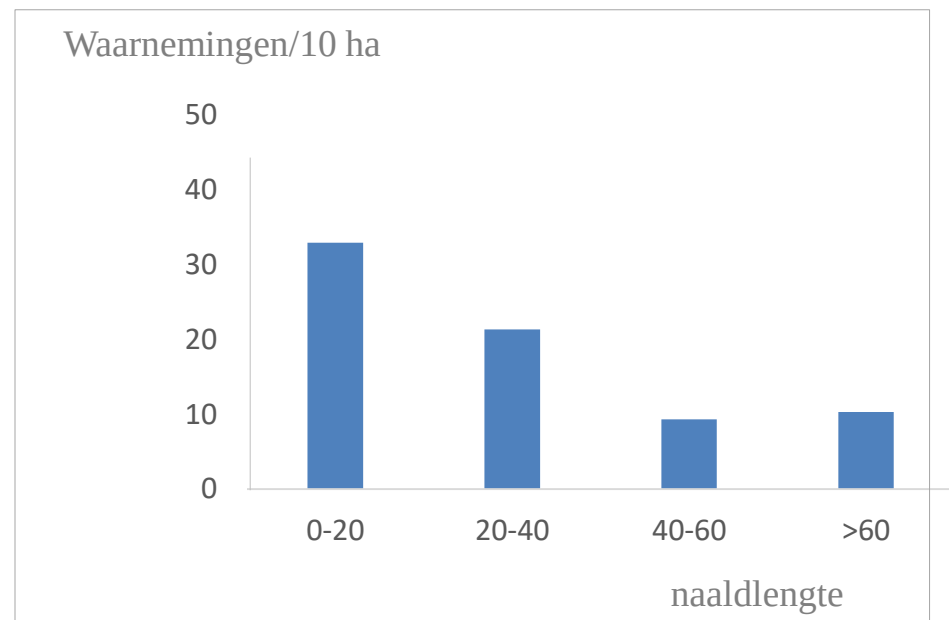
Invloed naaldlengte



Goudhaan 2006



Goudhaan 2011



Structurele correlatie

Voedselbron Goudhaan



Bladluizen tussen naalden

Korte naalden



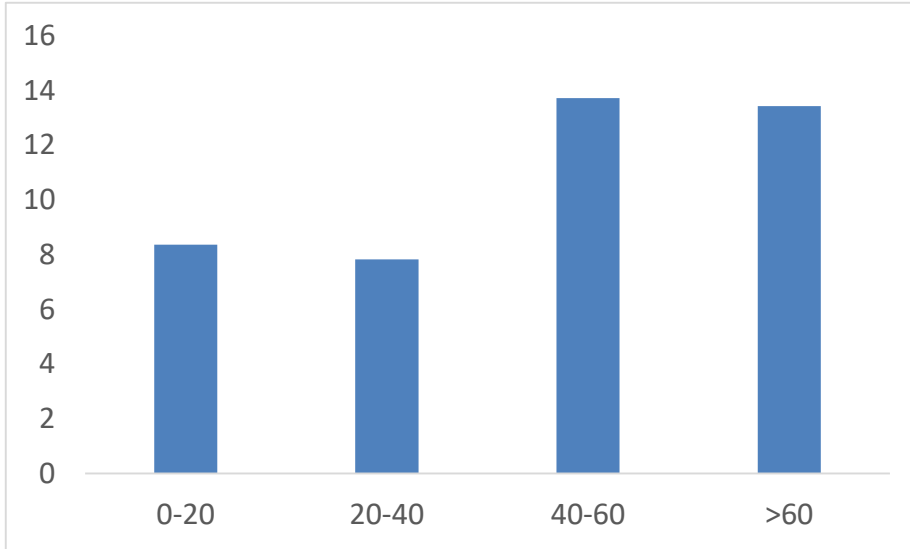
Meer vacatures

Invloed naaldlengte Kuifmees



Kuifmees 2006

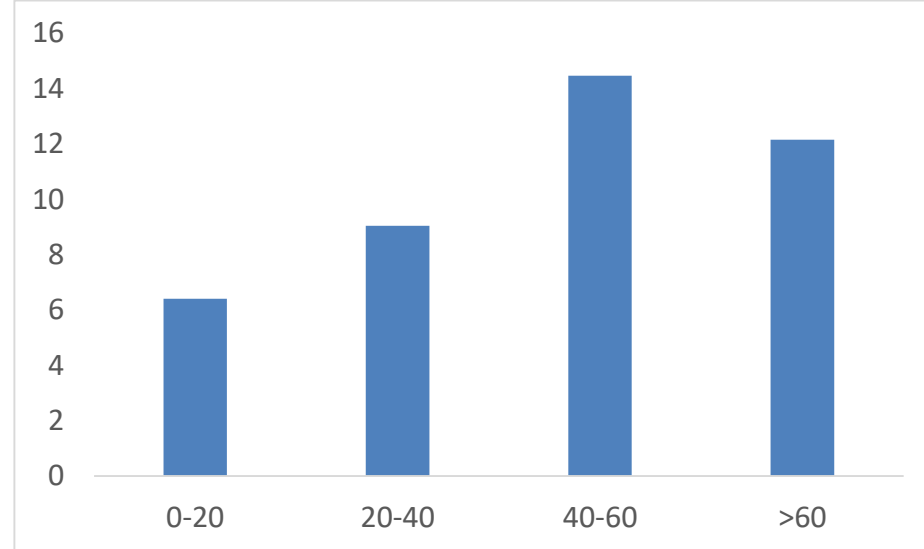
Waarnemingen/10 ha



naaldlengte

Kuifmees 2011

Waarnemingen/10 ha



naaldlengte

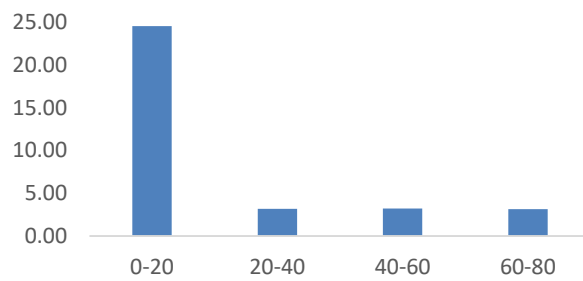
Eerder het omgekeerde..



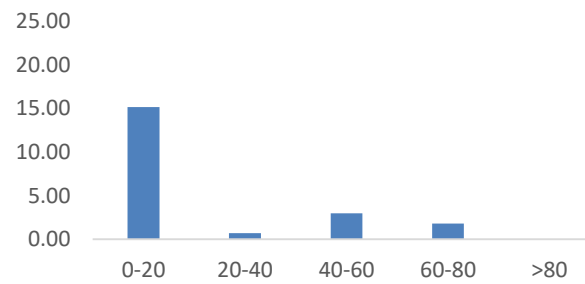
Fitis



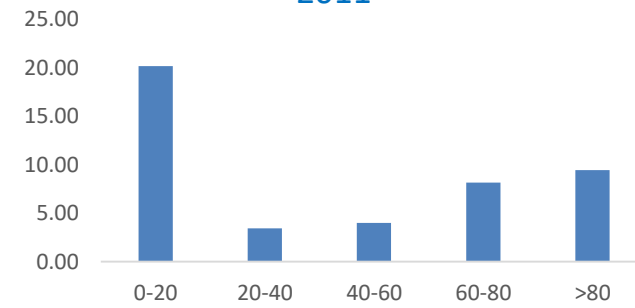
2001



2006



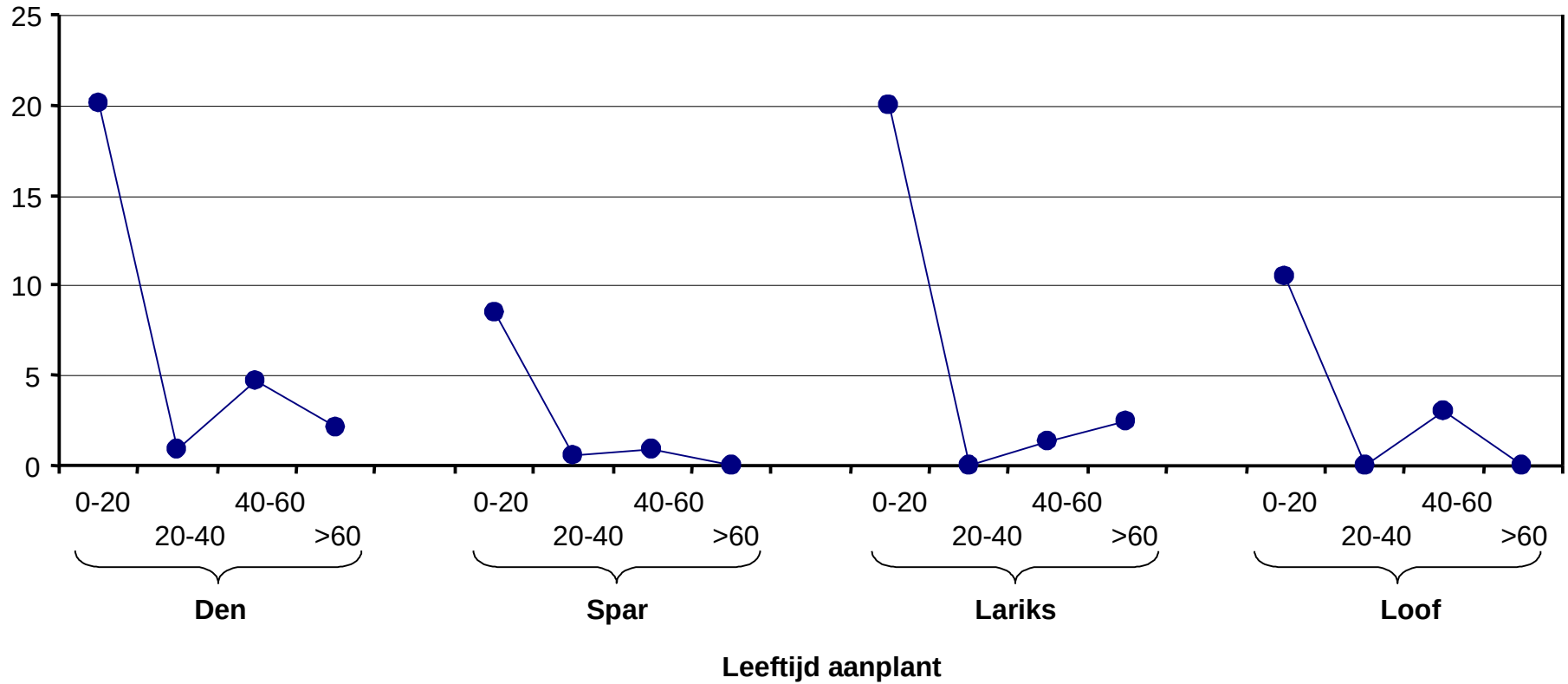
2011



Fitis



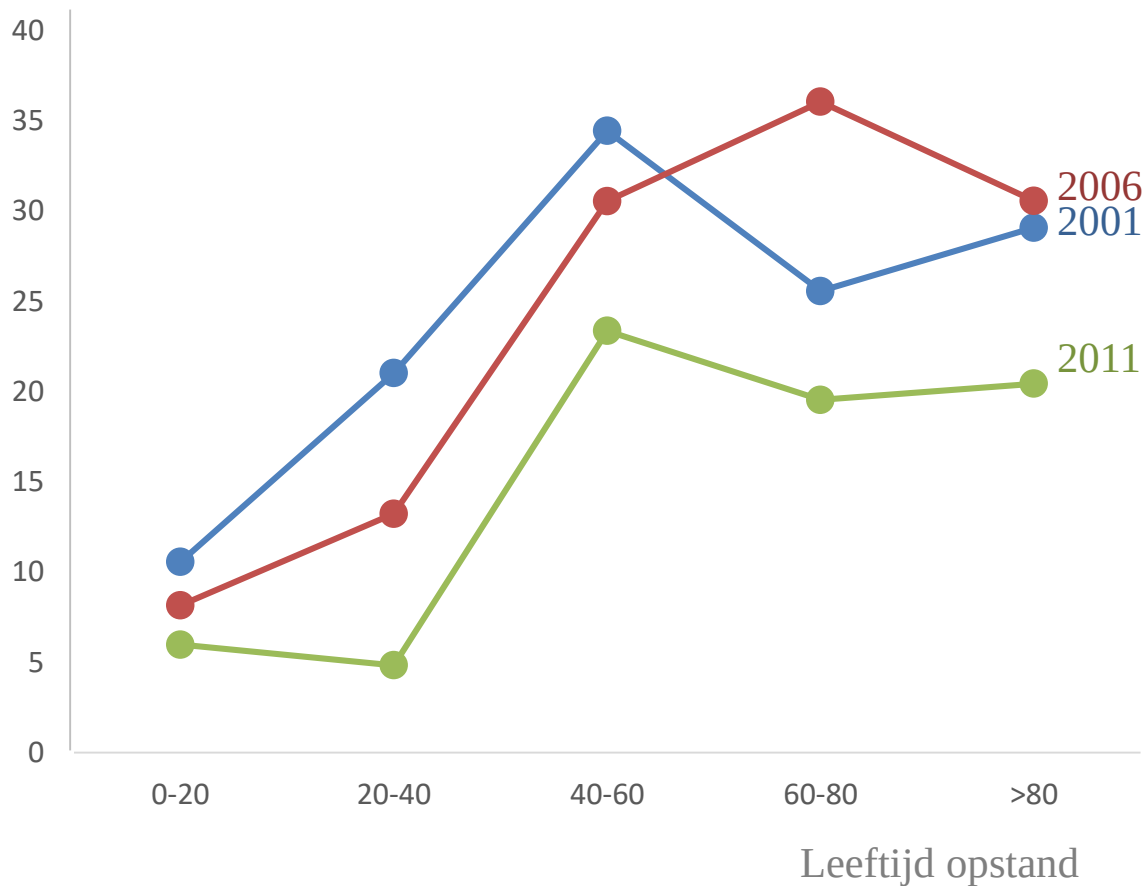
Waarnemingen/10 ha



Winterkoning



Waarnemingen/10 ha





 **einde lezing** 

Aan dit onderzoek werkten mee: Wim Deeben, Wil de Veer, Els de Veer-Bax, Pieter Wouters, Geert Sanders en Jan Kolsters