BEHAVIOR PATTERNS TO THE INTENSIFICATION VARY DIFFERENTLY WITHIN DAIRY PRODUCERS

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[3] AWE, Rue des Champs Elysées 4, 5590 Ciney, Belgium

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LIÈGE université Gembloux Agro-Bio Tech

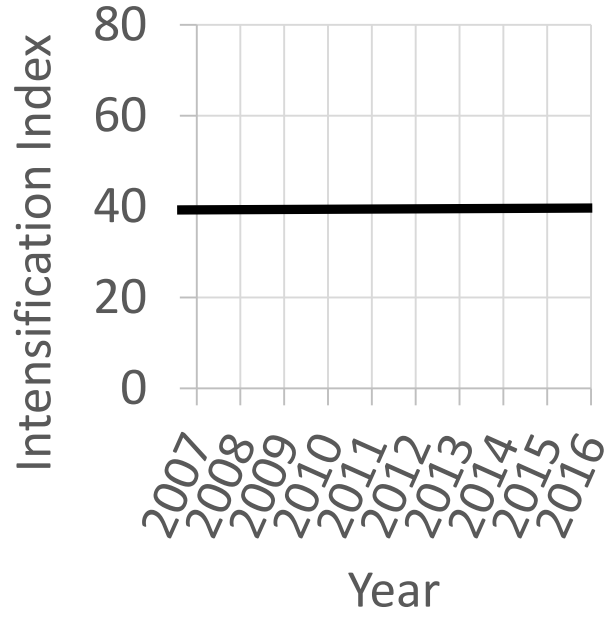
Intensification

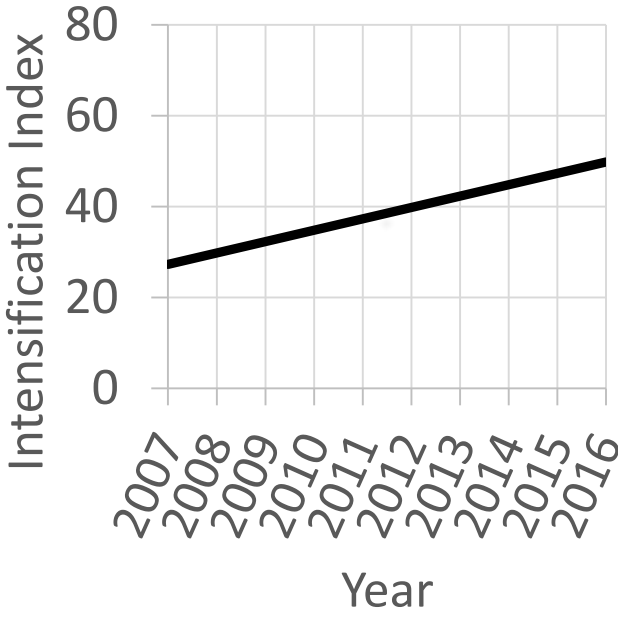
↗of intensification between 2004 & 2013
for **24** / 28 UE countries (UE, 2016)

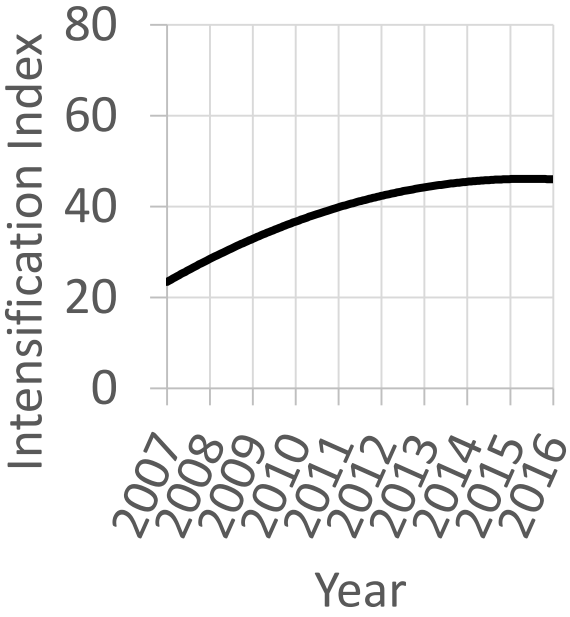
DO THE BEHAVIOR PATTERNS TO THE INTENSIFICATION VARY DIFFERENTLY WITHIN DAIRY PRODUCERS?

Conclusion

Principal patterns :







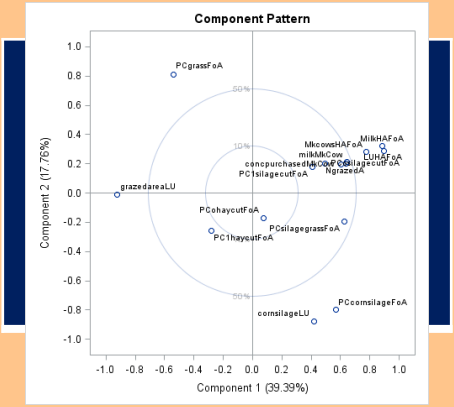
27%

8%

24%

Objective

Intensification = ?	Over time	Different ways of evolution	Why?

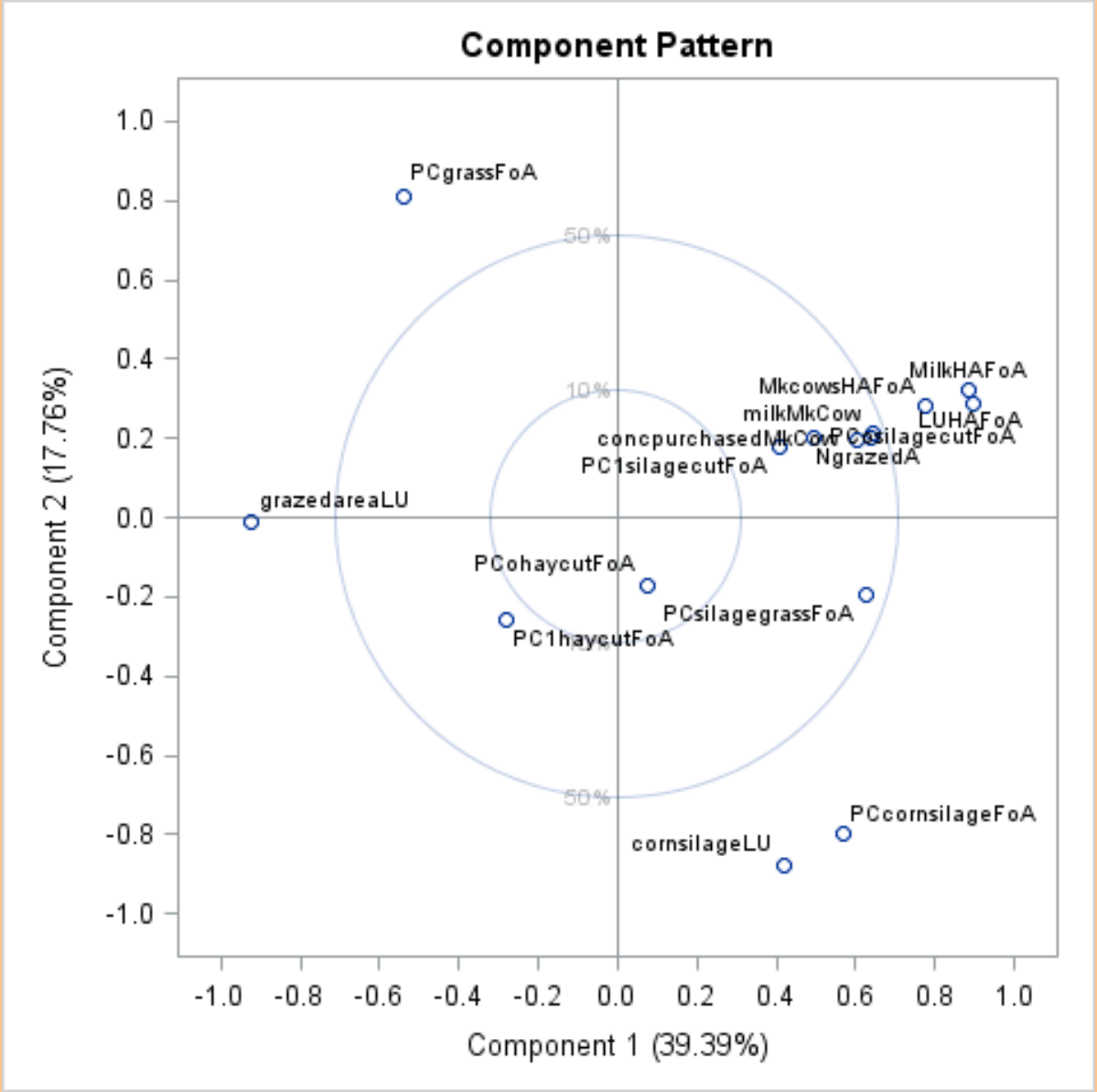


Over time

Different ways of evolution

Why?

- 144 dairy producers accounts in the Walloon Region
- During 10 years 2007-2016
- Selection of 15 intensification variables
  - % of first/other hay/silage cut
  - N fertilizer/ha of forage area (**FA**)
  - Composition of FA (grass, corn silage, grass silage)
  - Grass/corn silage per LU
  - Purchased concentrated per cow
  - Milk/ cow, milk/ ha, cow/ha, LU/ha



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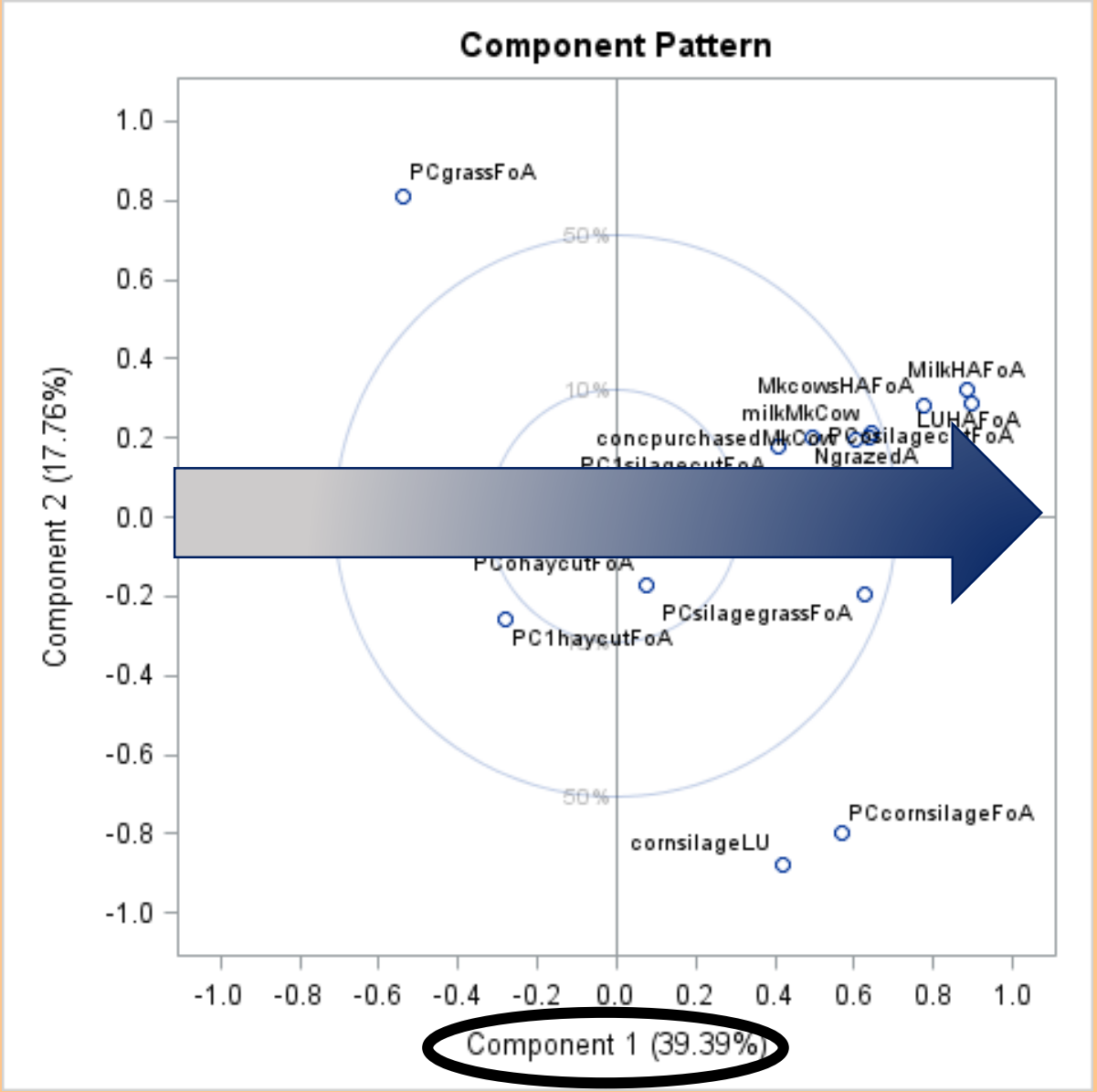
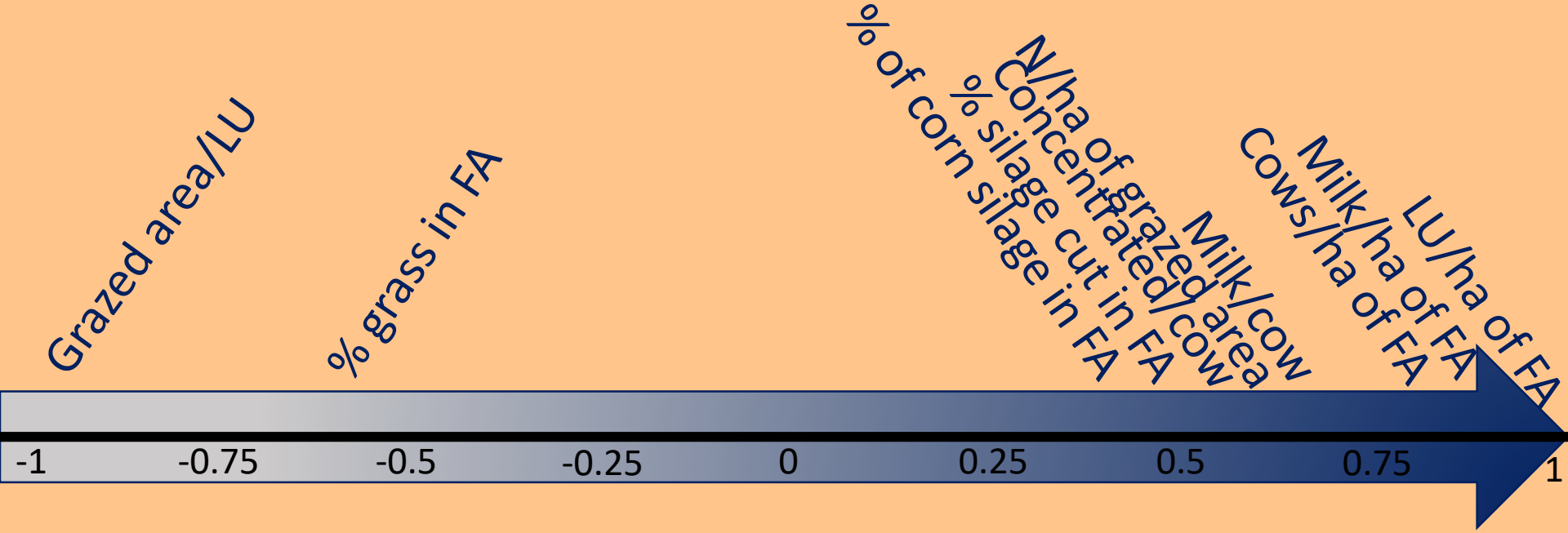
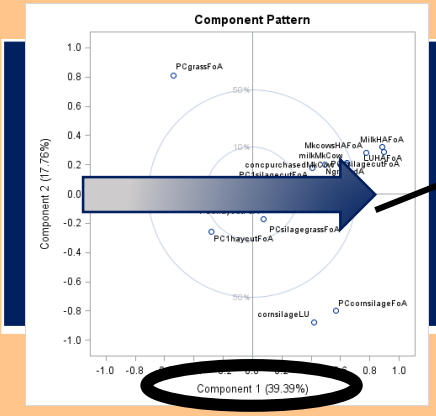
- During 10 years 2007-2016
- Selection of 15 intensification variables

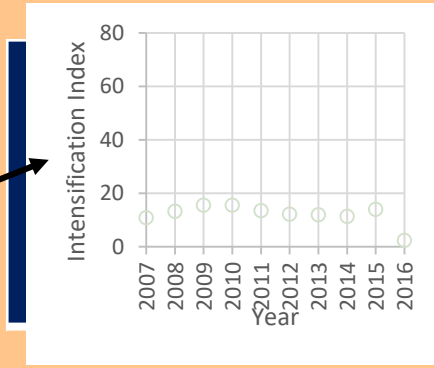
Principal component analysis



Correlations intensification variables –index

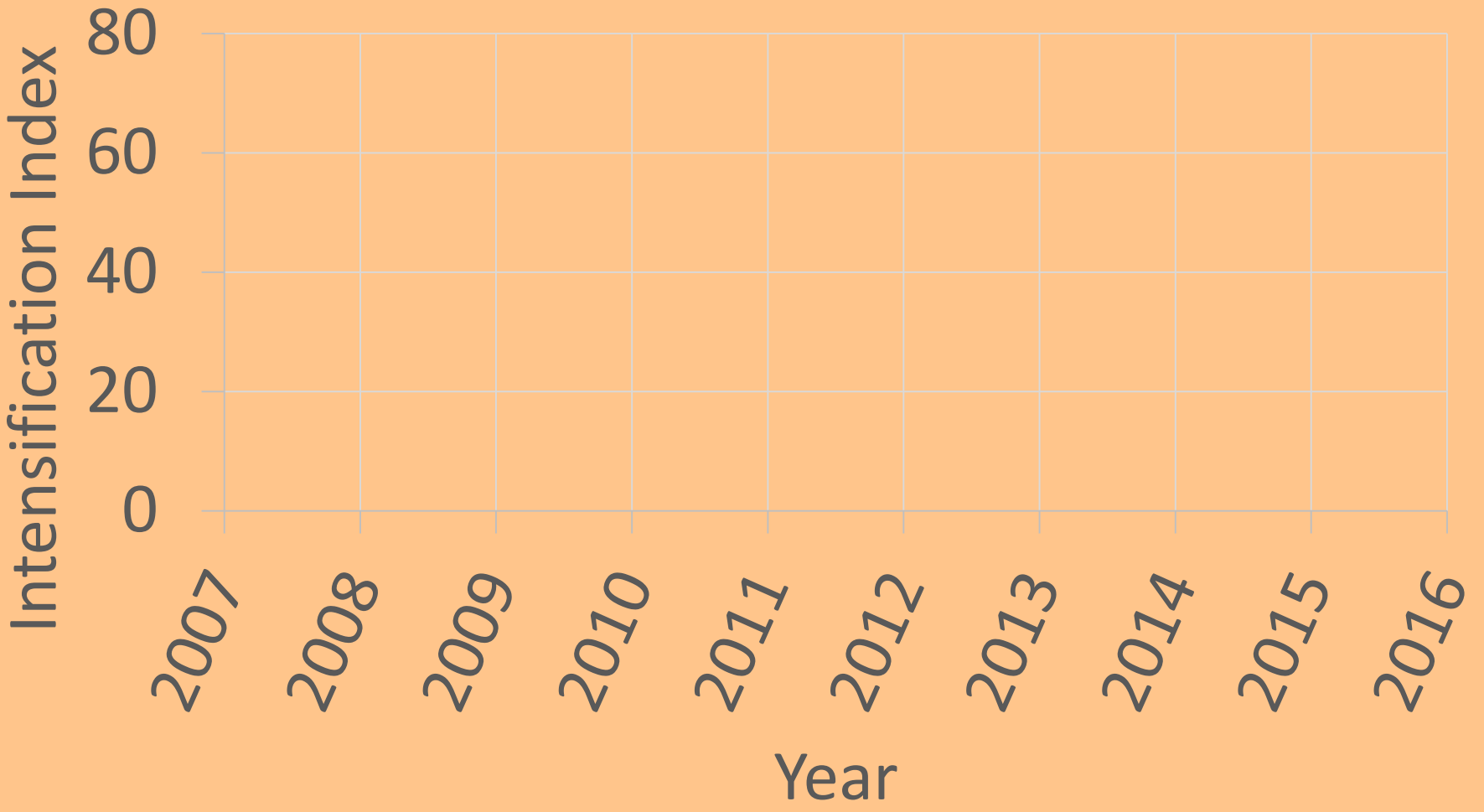


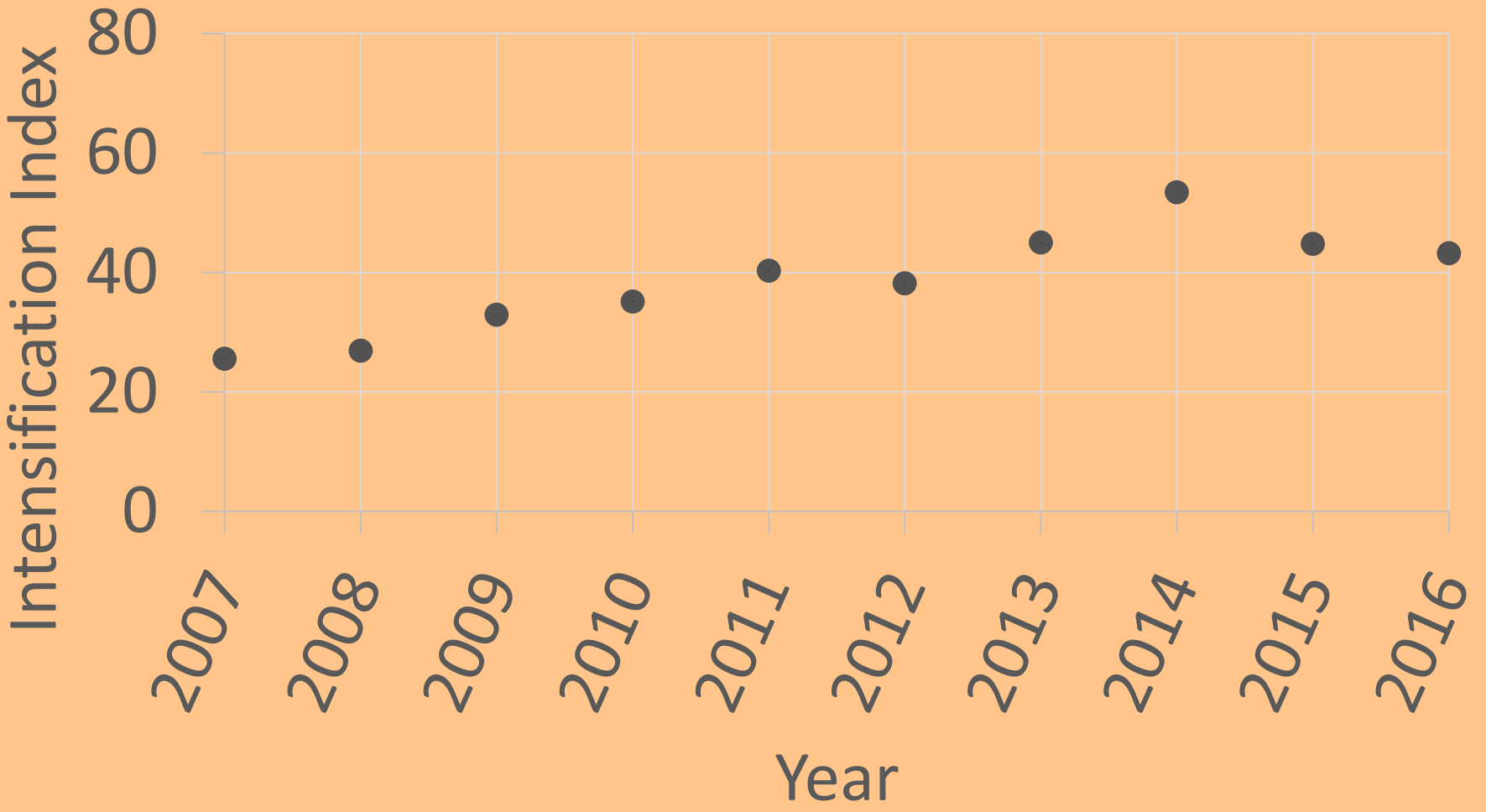




Different ways of evolution

Why?


Intensification Index
80
60
40
20
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Year


Intensification Index
80
60
40
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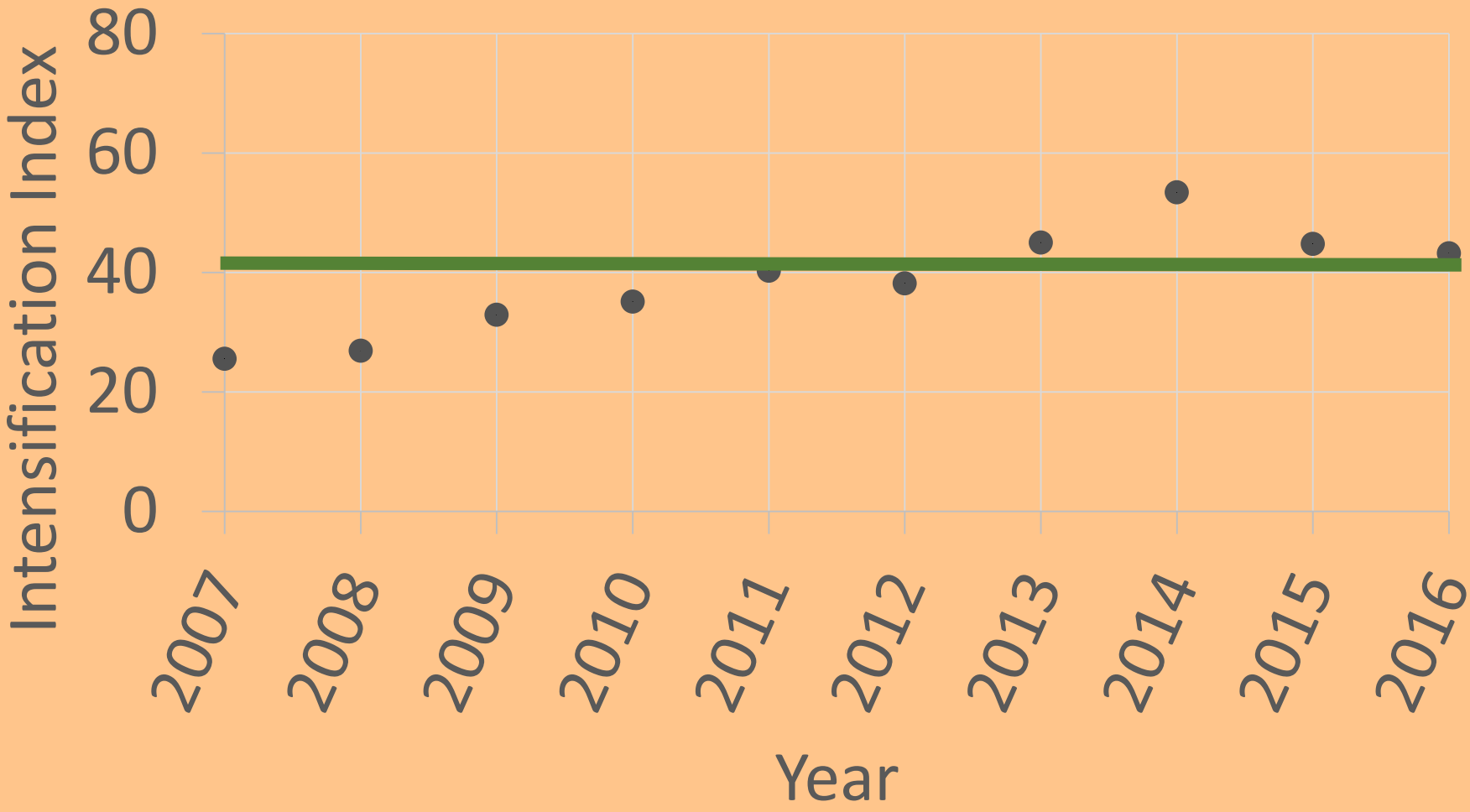
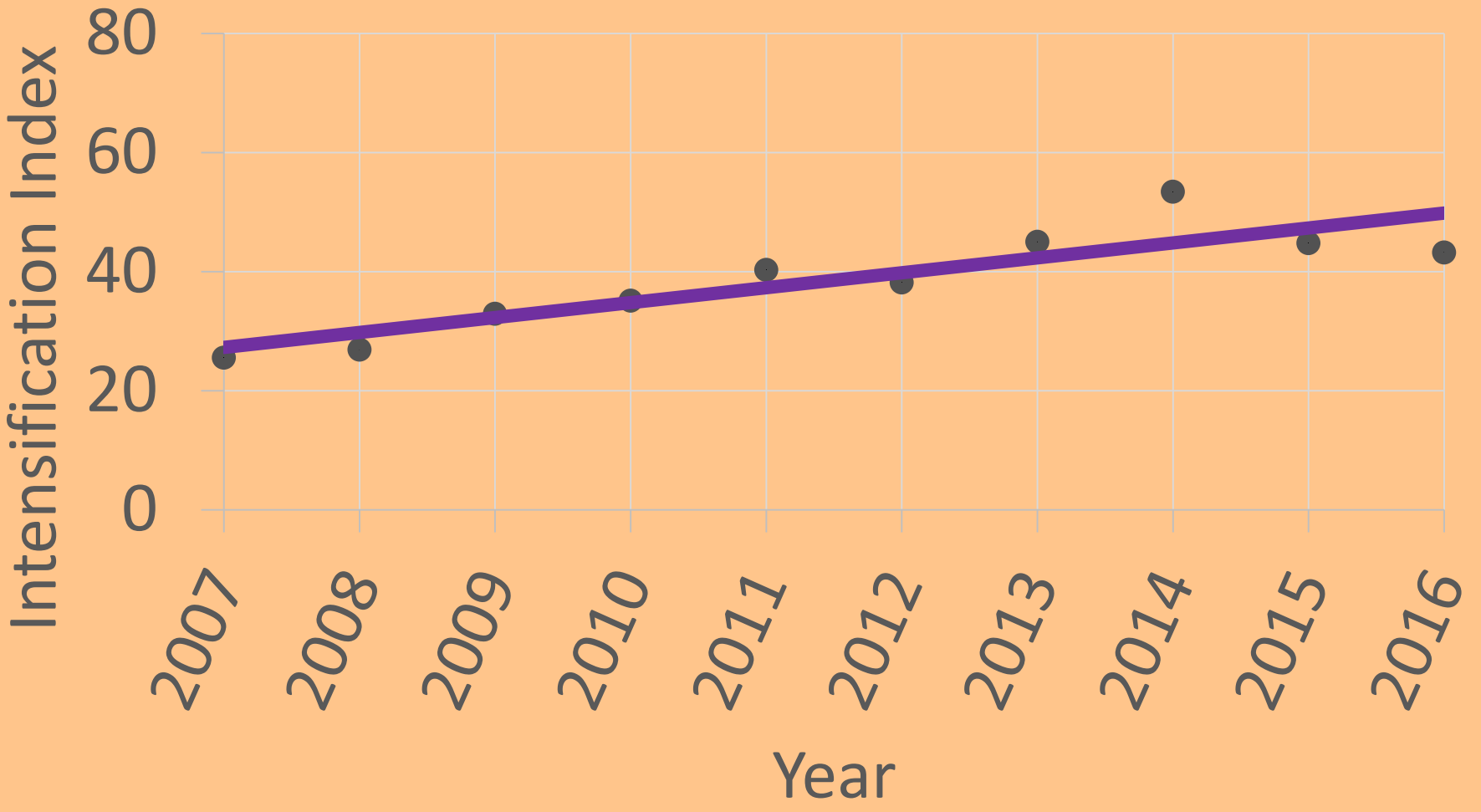
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Year

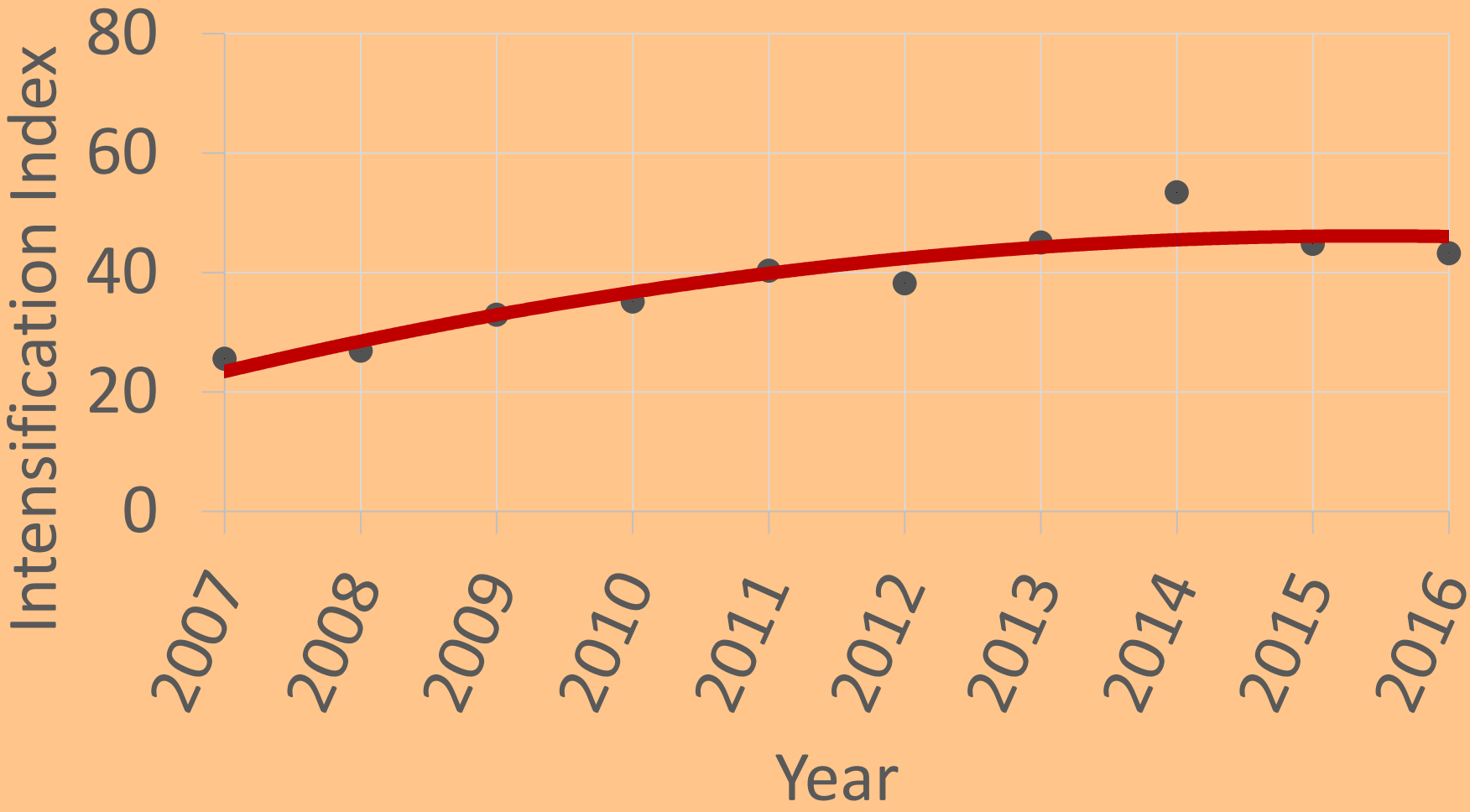
$$Y = a + b*year + c*year^2$$

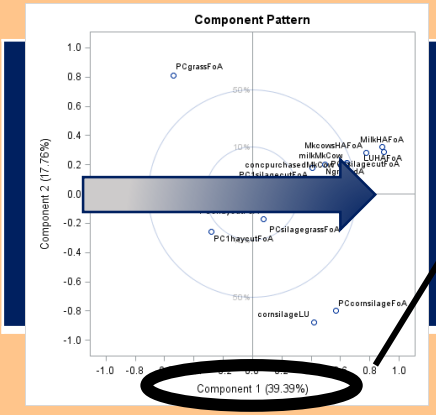


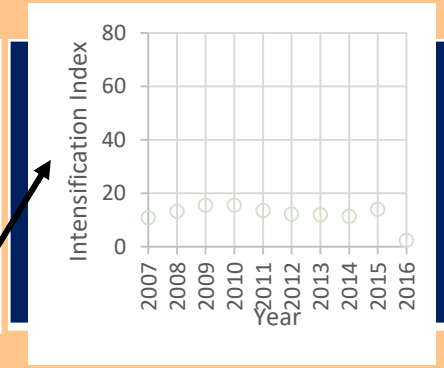
$$Y = a + b*year + c*year^2$$

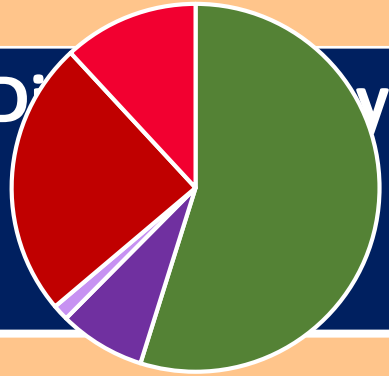


$$Y = \mathbf{a} + \mathbf{b}*year + \mathbf{c}*year^2$$



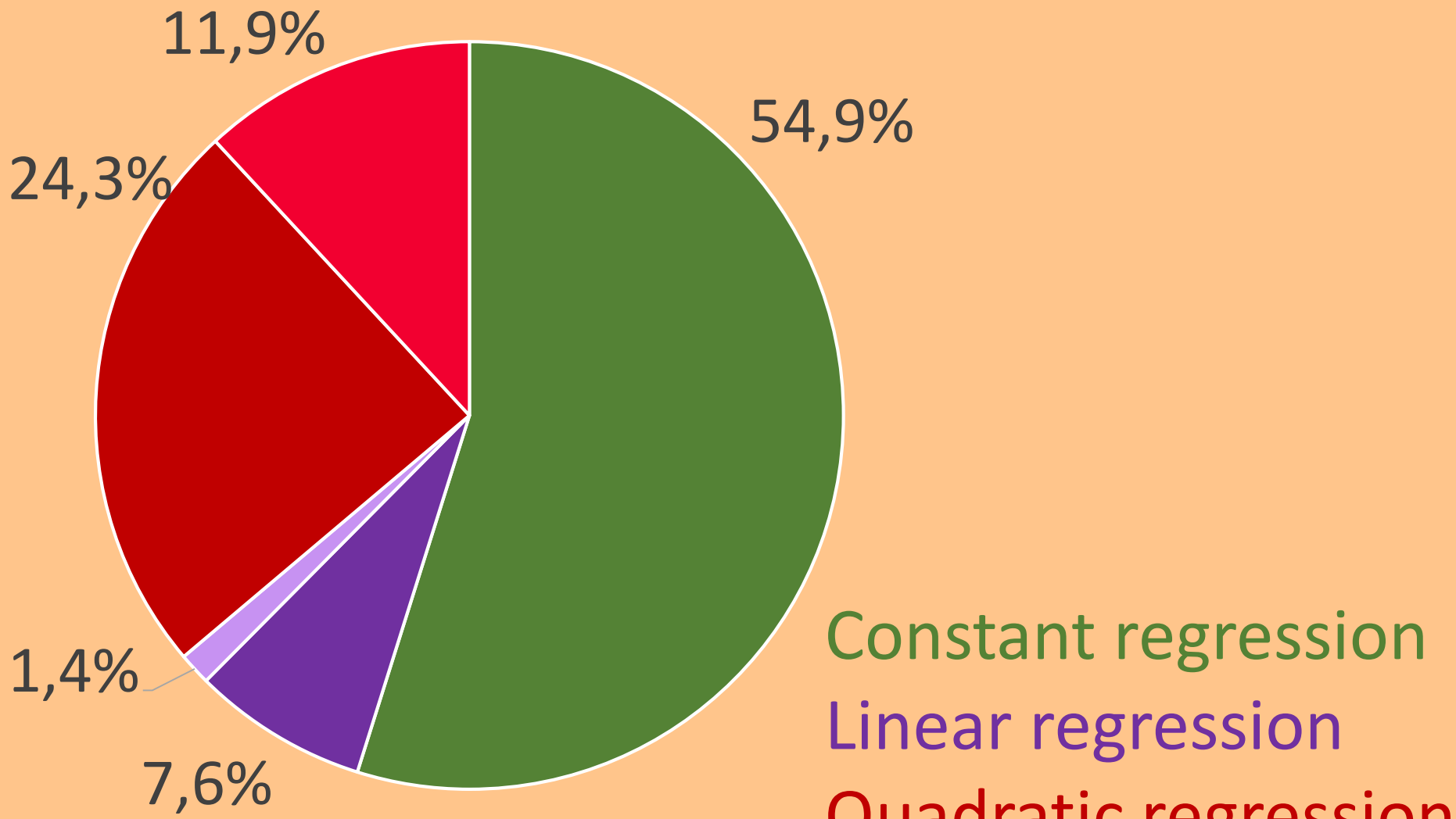

Component Pattern
PCgrassFoA
MilkHAFoA
MkcowsHAFoA
milkMkCows
PCsilagegrassFoA
PC1hayscutFoA
PCcornsilageFoA
cornsilageLU
Component 2 (17.76%)
Component 1 (39.39%)


Intensification Index
Year
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

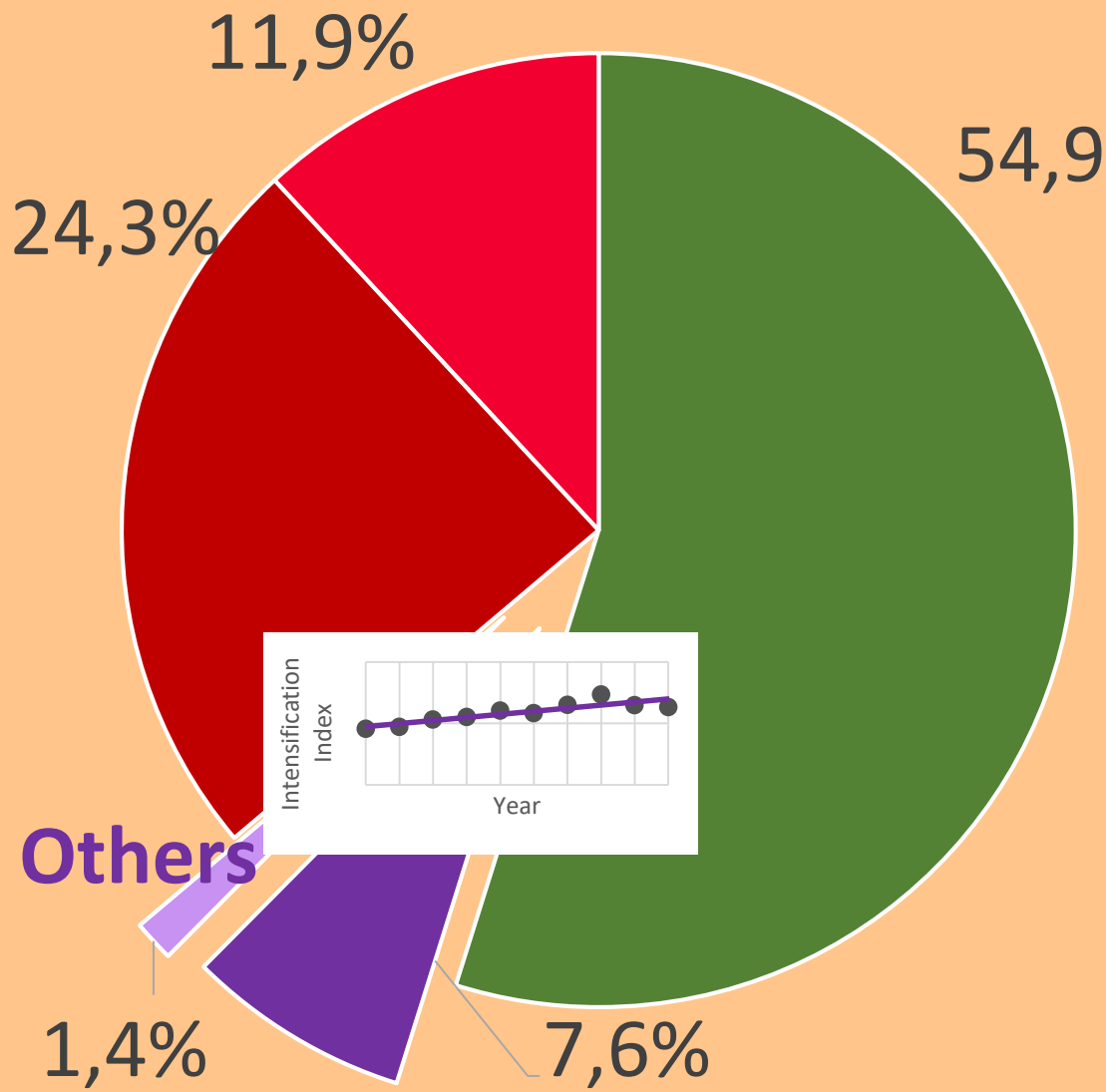


Why?

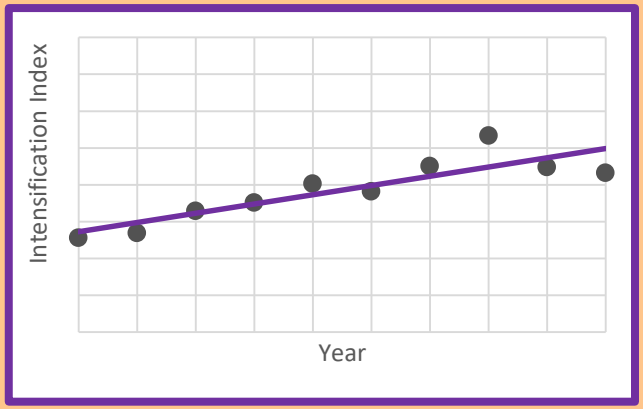
$$Y = \mathbf{a} + \mathbf{b}*year + \mathbf{c}*year^2$$



$$Y = a + b*year + c*year^2$$



Linear regression



$$Y = a + b*year + c*year^2$$

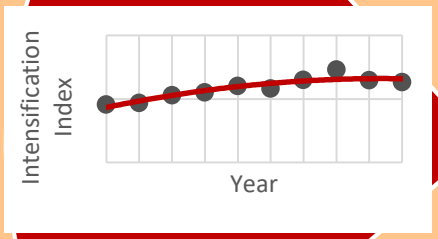
11,9%

Others

24,3%

54,9%

Quadratic regression

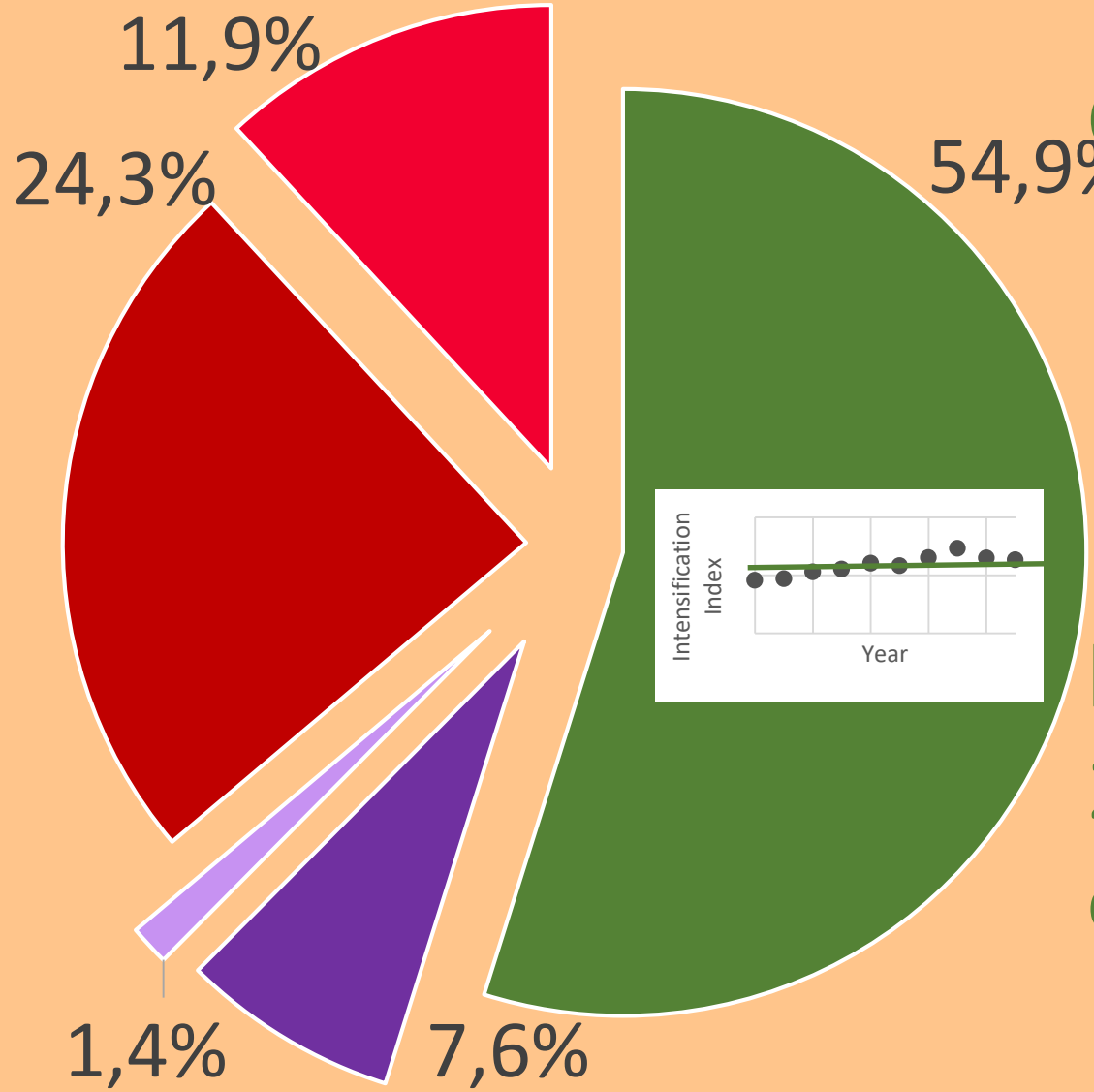


Mean peak of inflexion : 2012

1,4%

7,6%

$$Y = a + b*year + c*year^2$$



Constant regression

➔ Separation before and after 2012 (=mean peak of inflexion)

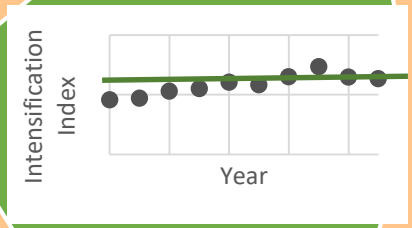
$$Y = a + b*year + c*year^2$$

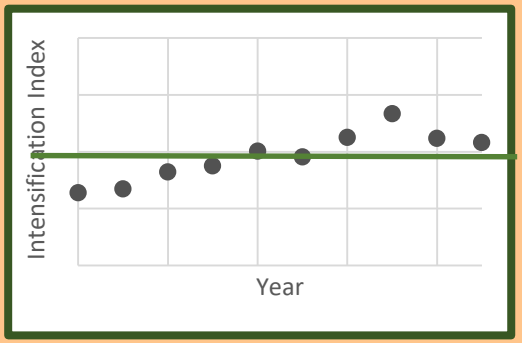
14,1%

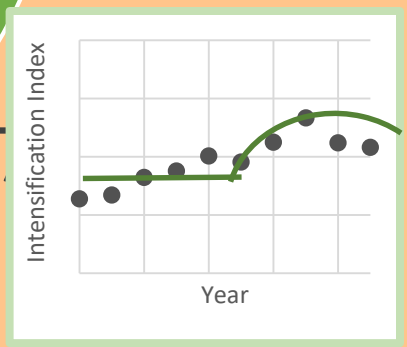
Others

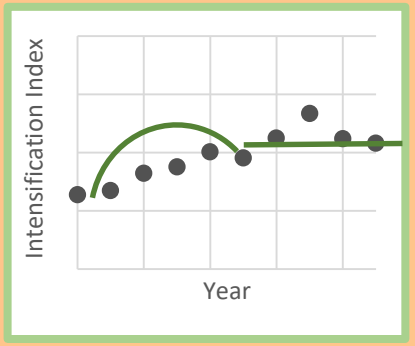
Constant regression

2007 2012/2012 2016

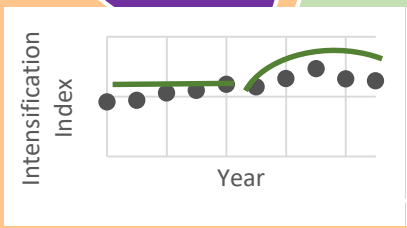




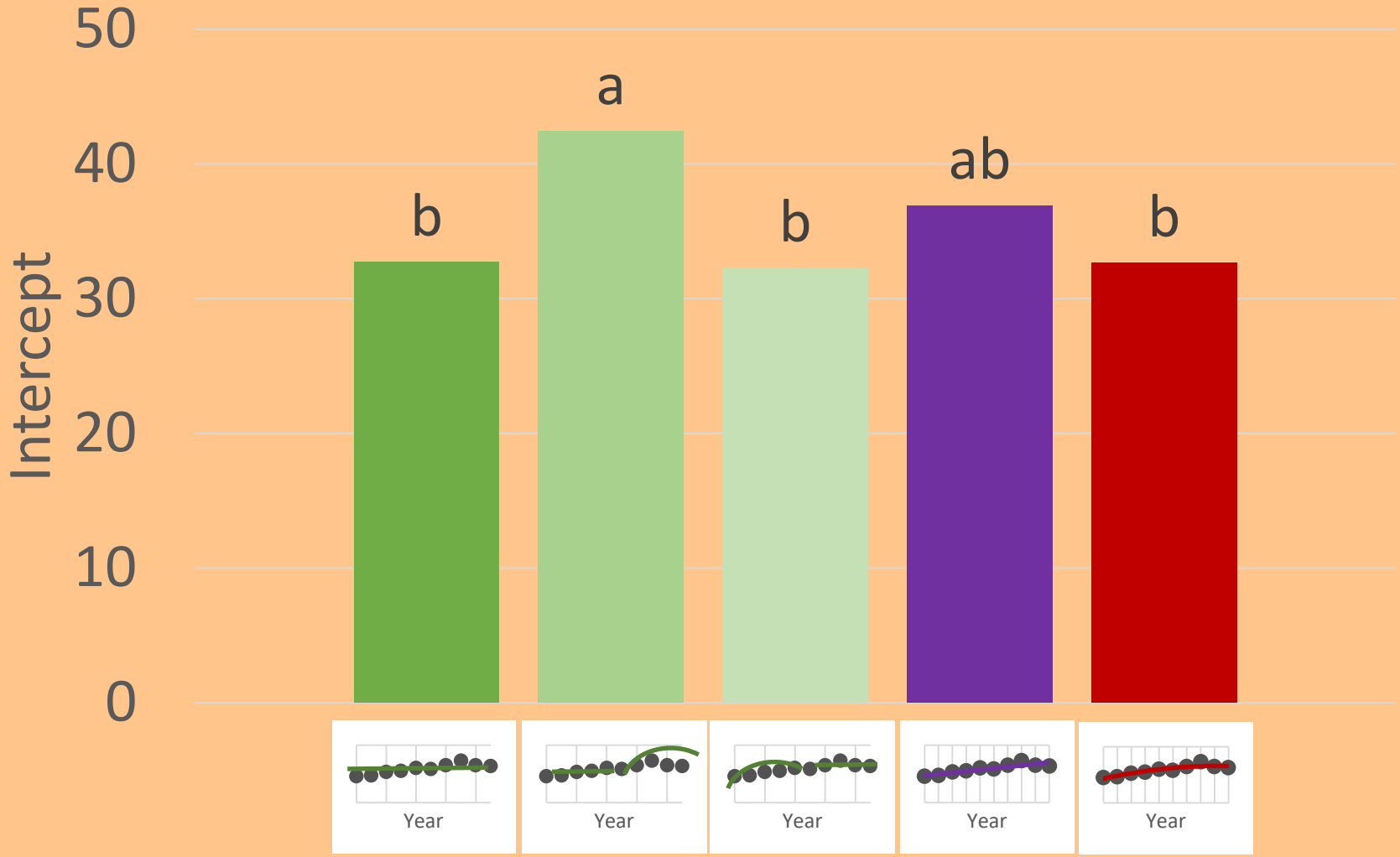


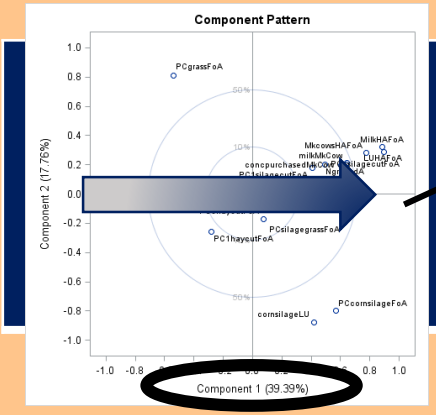


6,9%



Initial level of intensification in function of pattern

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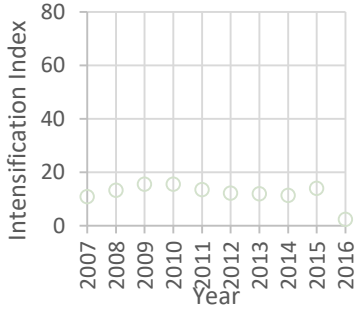
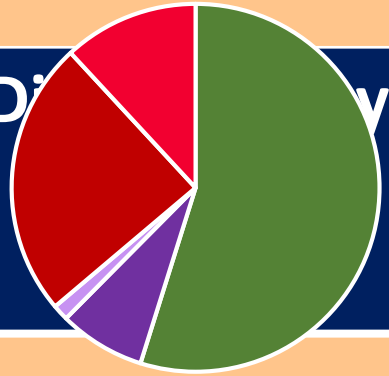

Intensification Index
Year



Why?

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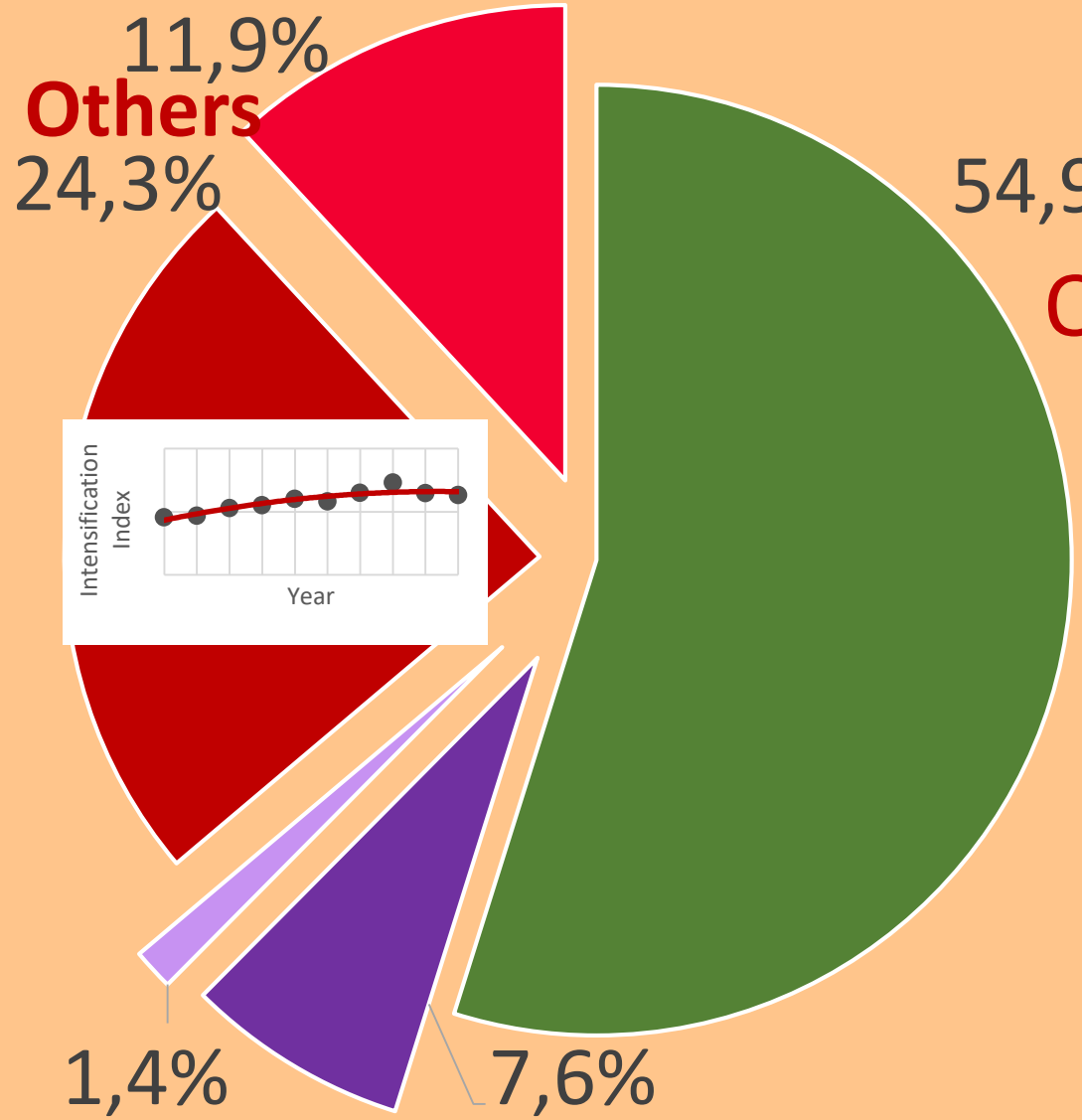

Quadratic regression

Mean peak of inflexion : 2012

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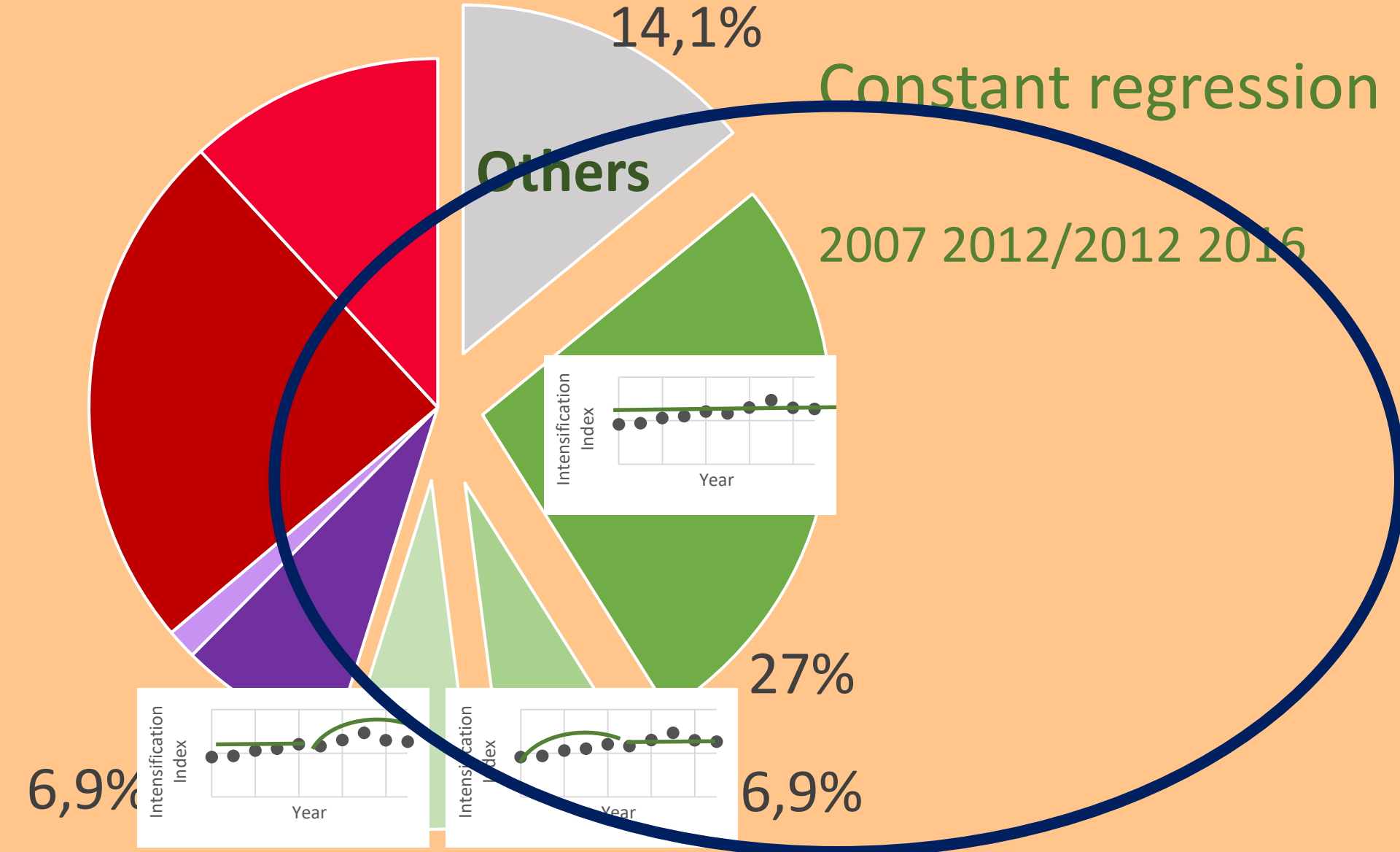

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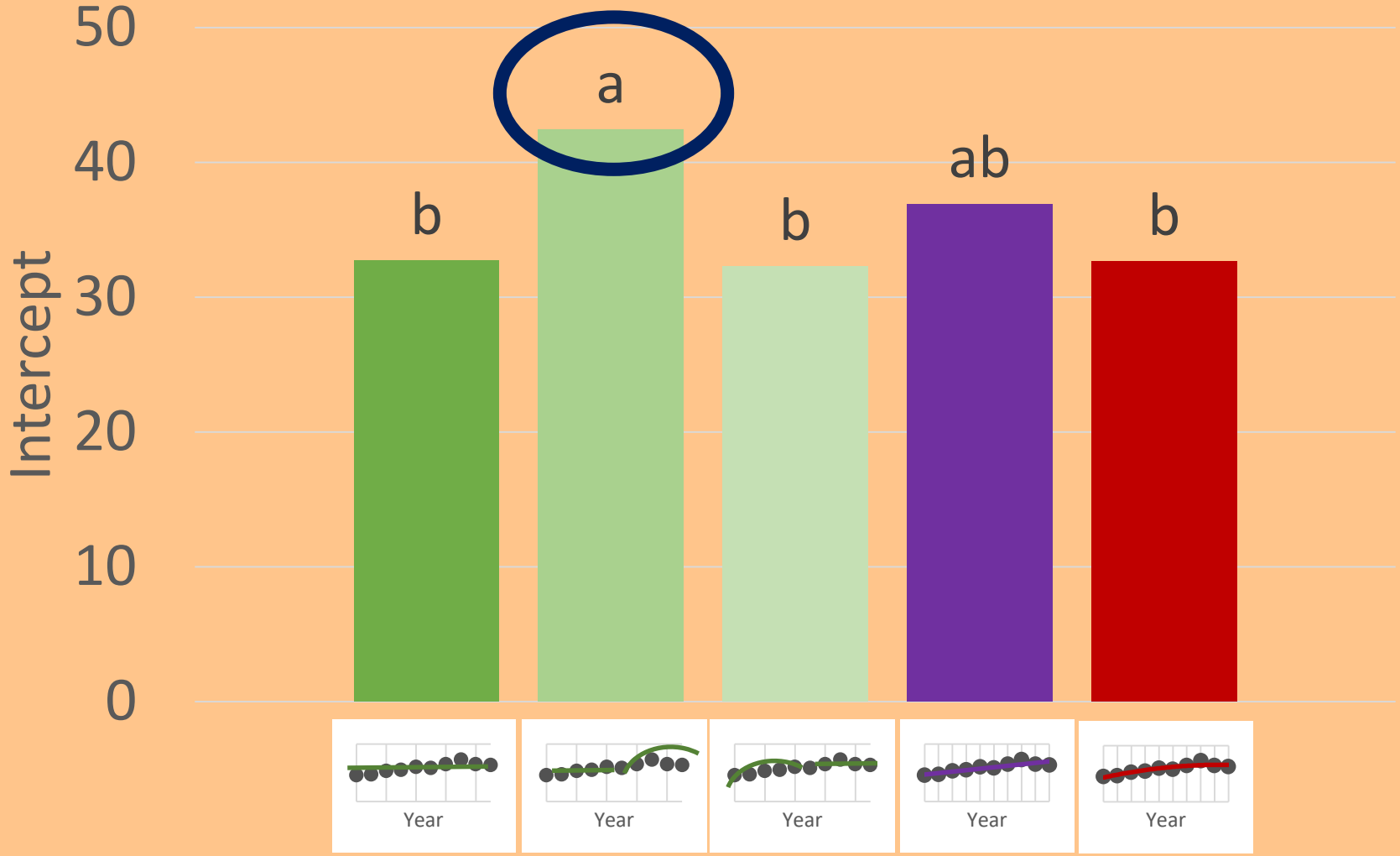


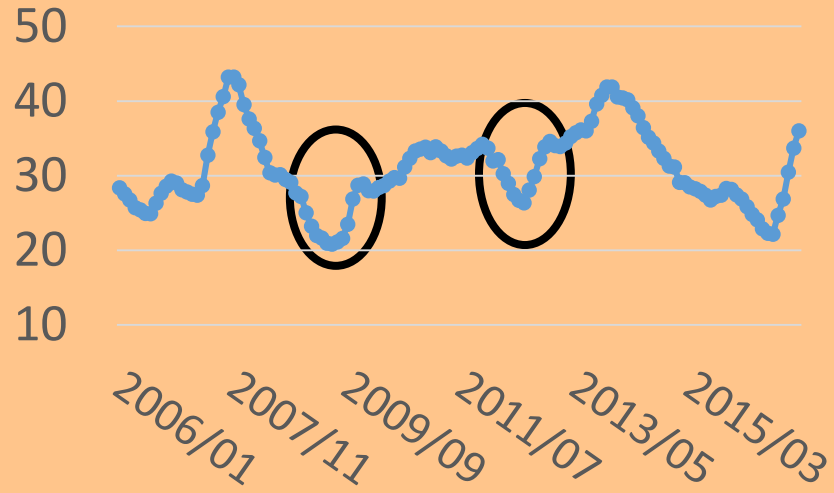
2012 crisis

= second crisis in 4 years

➔ awareness of volatility

Milk price 2006-2016 (cents)

Milk market observatory, European Union, 2018



2012 crisis

= second crisis in 4 years

➔ awareness of volatility

➔Change of management practices, whose feeding

=> impact on intensification

2012 crisis

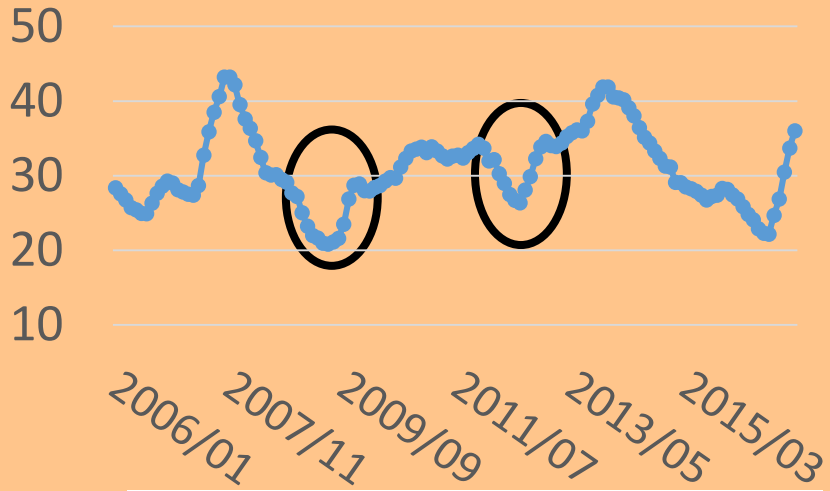
= second crisis in 4 years

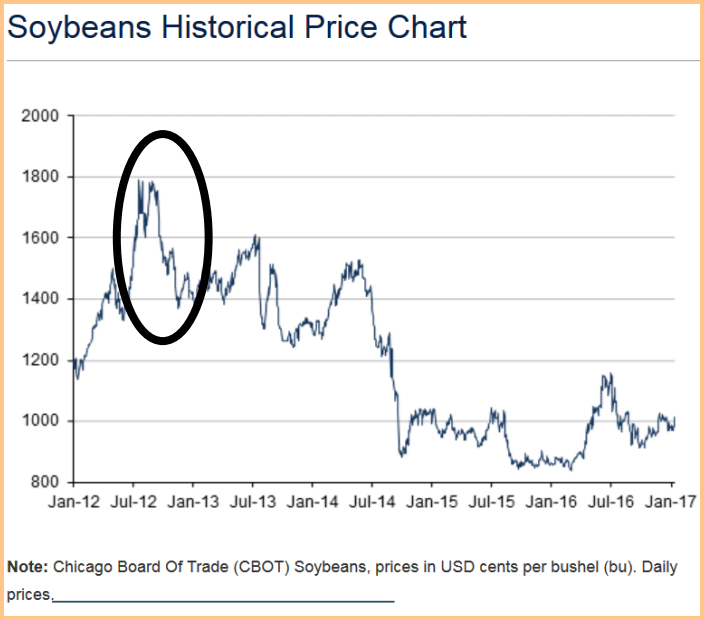
➔ awareness of volatility

= Output and **input** crisis

Milk price 2006-2016 (cents)

Milk market observatory, European Union, 2018





2012 crisis

= second crisis in 4 years

➔ awareness of volatility

➔Change of management practices, whose feeding

=> impact on intensification

= Output and **input** crisis

➔Less dependance on purchased feed, more self-sufficiency feed system

=> impact on intensification

ACKNOWLEDGMENTS

- Data

- Financial support

anne-catherine.dalcq@uliege.be

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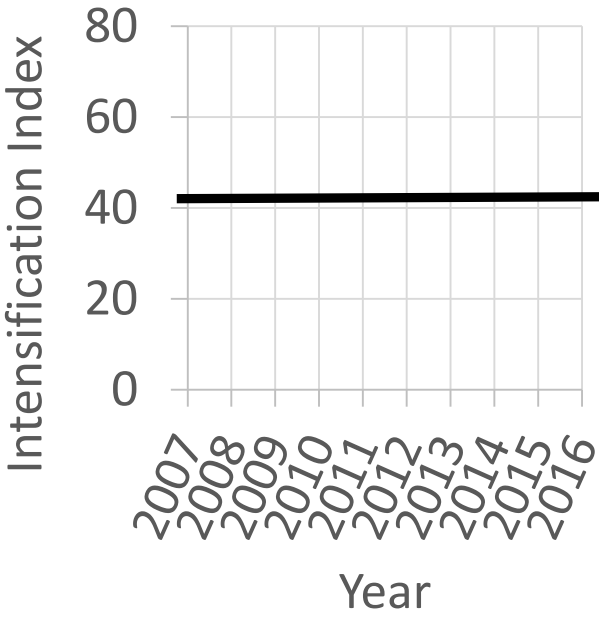

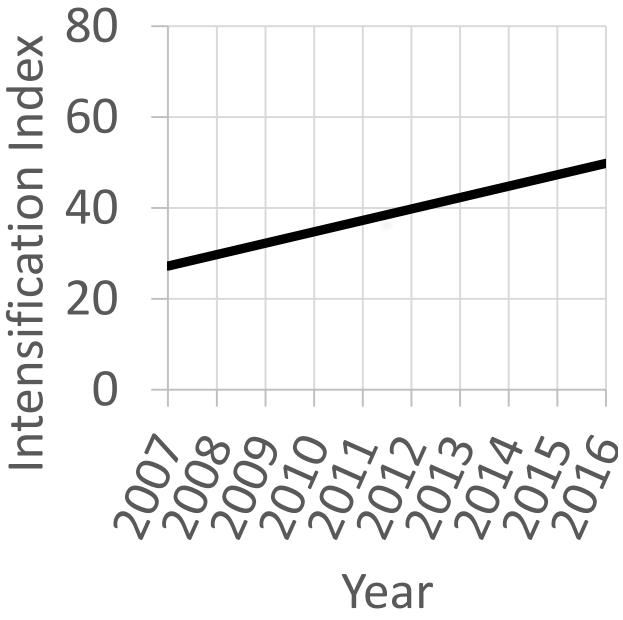

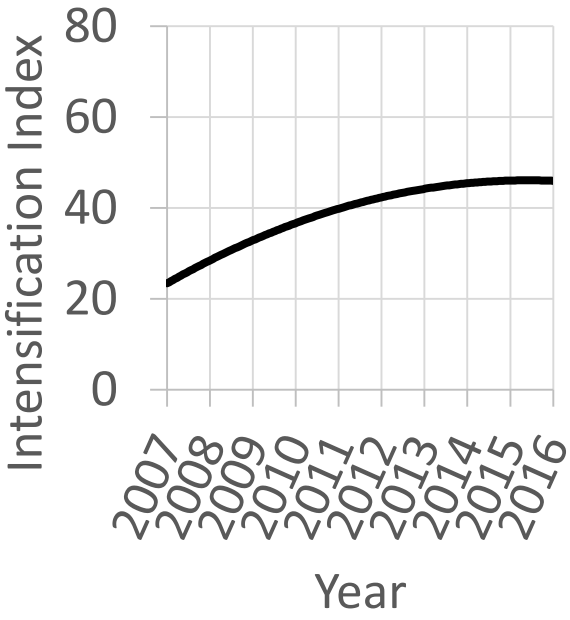

27% 8% 24%

Effect of 2012 : a **second** crisis in a **short time**

and

an **input** crisis

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