



Forrisk

Douglas Fir

Sylviculture / drought tolerance

Midi - Pyrénées and Limousin regions

Bilbao, 9 septembre 2014



Sylviculture / Douglas fir drought tolerance

Could silvicultural practices influence the resistance of Douglas fir to drought?

⇒ Material proposed :

Two silvicultural trials

⇒ Method

Growth measurements, wood sampling for X ray analysis

Soil (profile description, water reserve for the different horizons)

Meteorological data analysis

→ *Trials included in the Douglas fir GIS cooperative network (INRA, ONF, IDF, IRSTEA, FCBA)*

Trials with different densities at planting and different silvicultural scenarios

Limousin

St Victor

Midi Pyrénées

Massaguel

protocol :

densities at planting :

2500, 1650, 1111, 500, 350 /ha

thinnings in accordance with dominant height





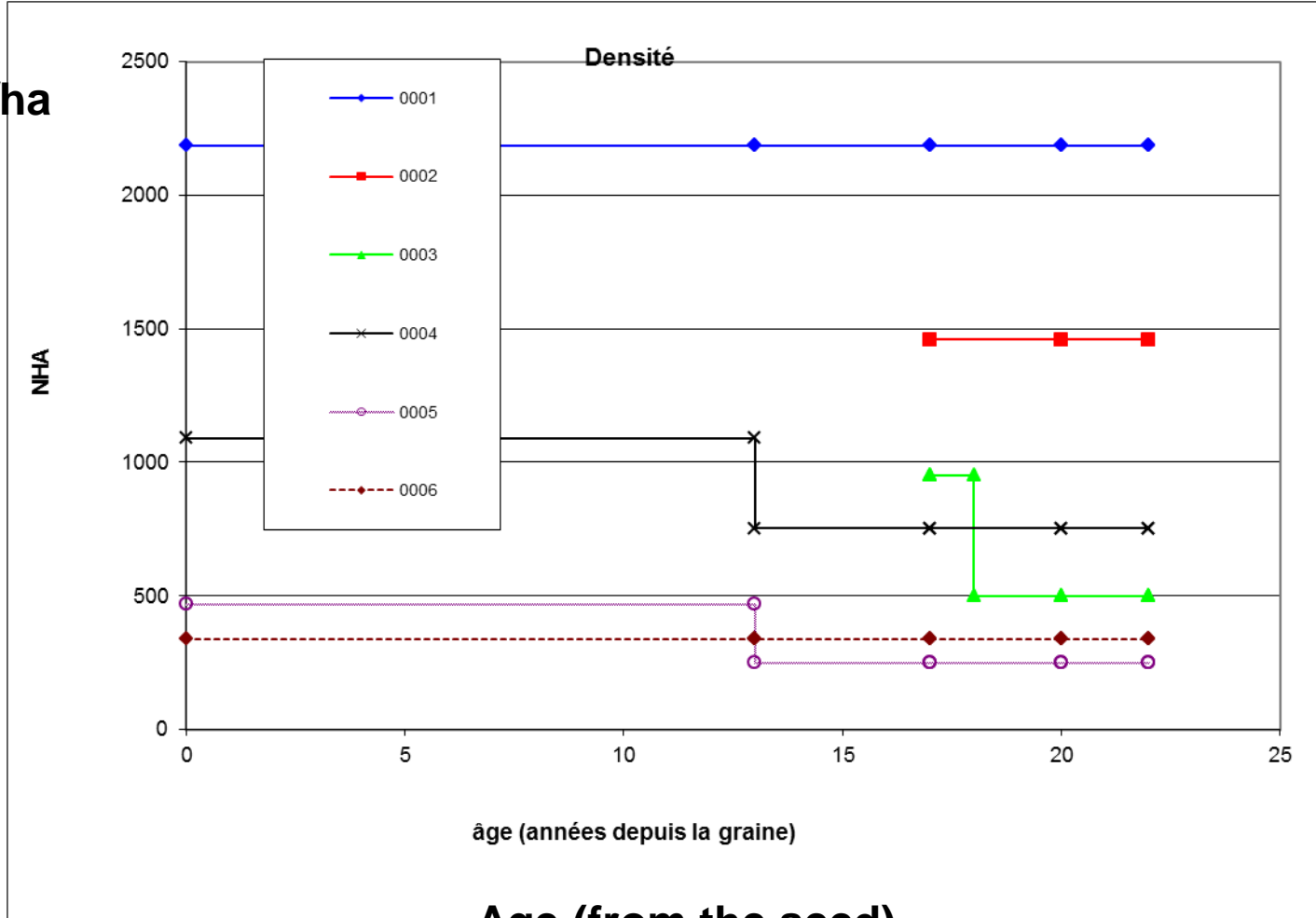
ST VICTOR

No scénario	1	2	3	4	5	6
N/ha At planting (04/1995)	2506 (3x1.33m)	1667 3x2 m	1111 3x3 m	1111 3x3 m	501 6x3.33 m	351 6x4.75 m
(Ho) 6 m				750 <i>2004</i>	250 <i>2004</i>	
13 m			500 <i>2010</i>			
18 m		1100	250	500	180	
23 m		750	180			
27 m		500				
31 m		350				
35 m		250				

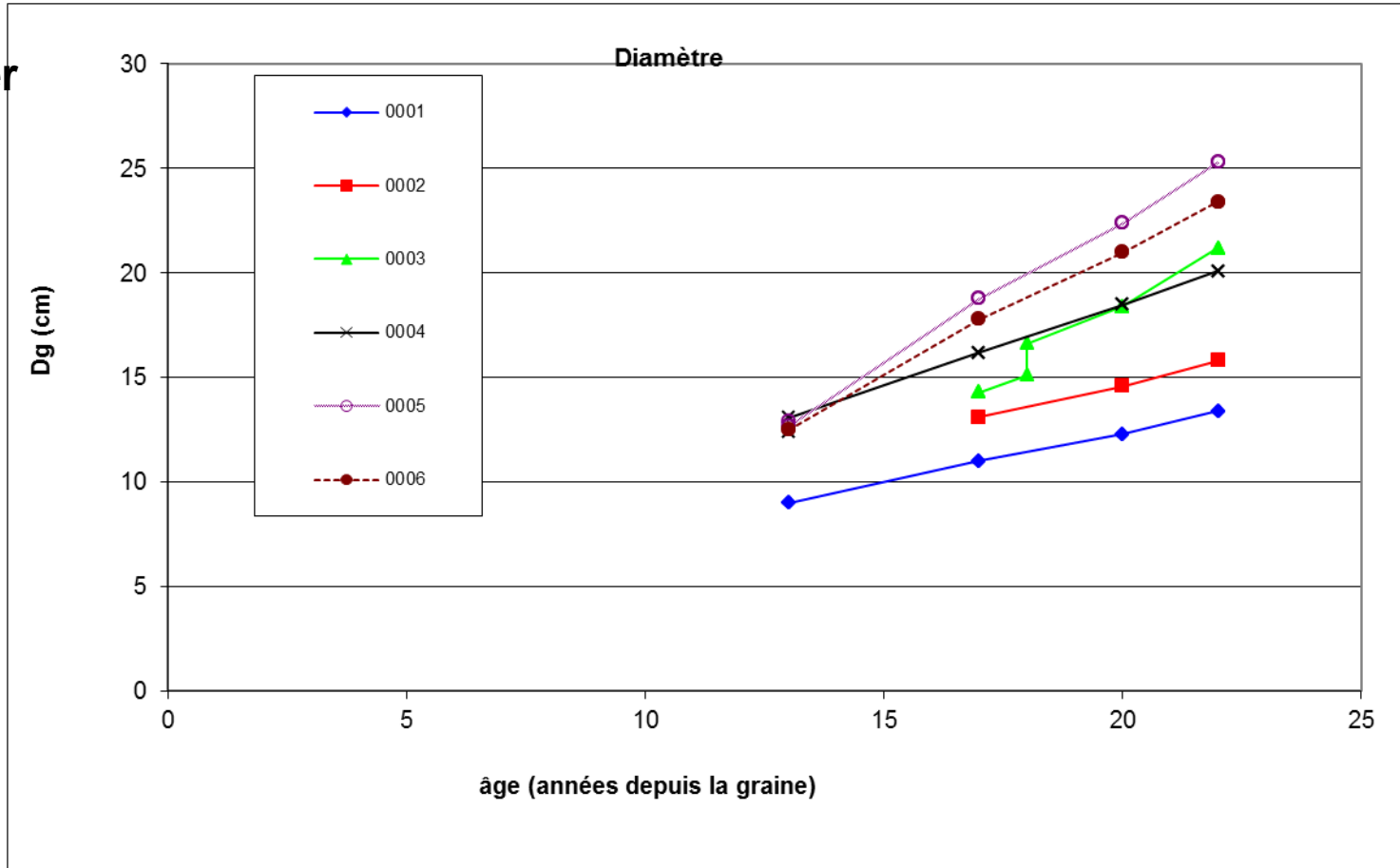


St Victor

Trees/ha

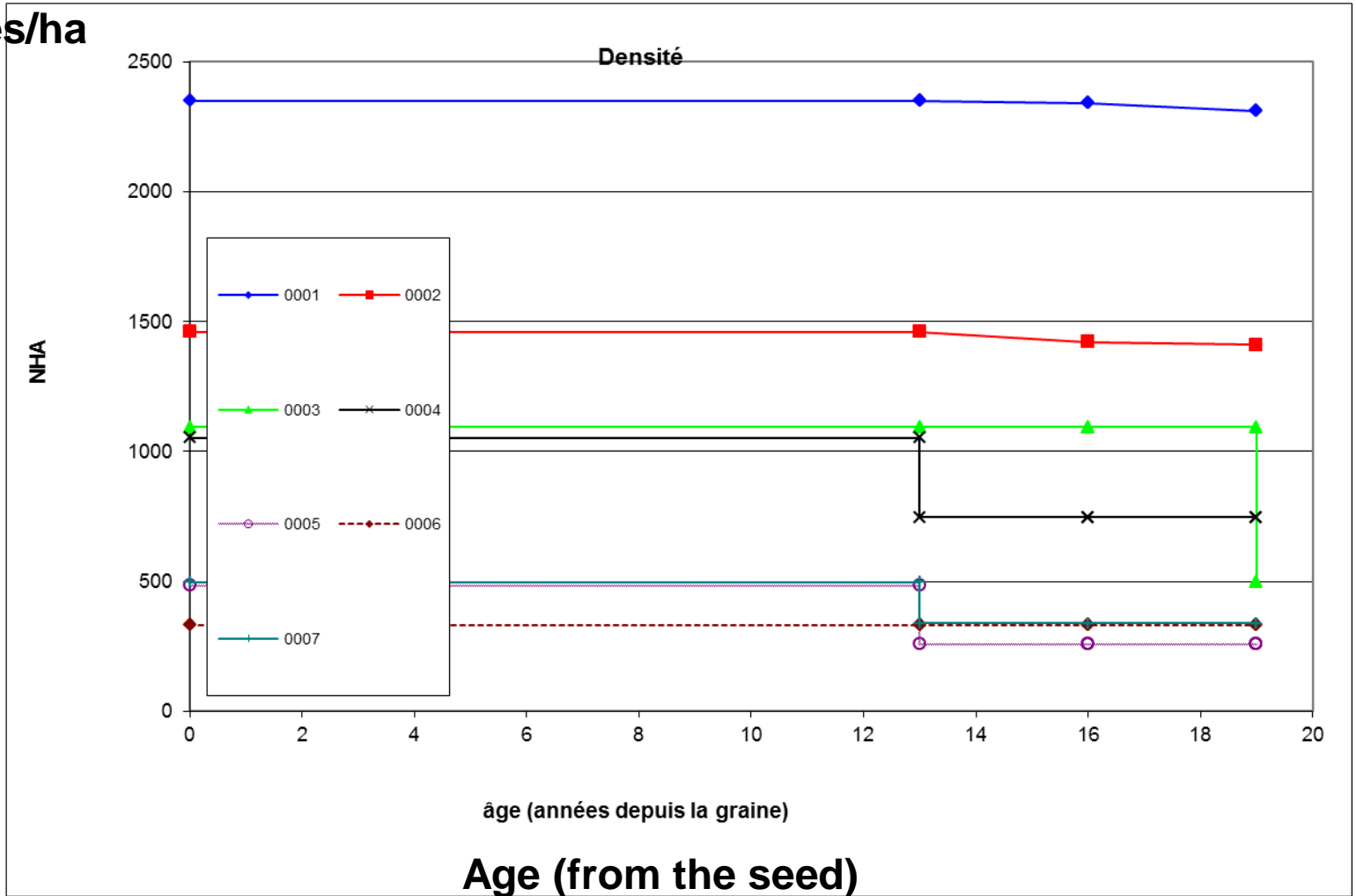


Diameter

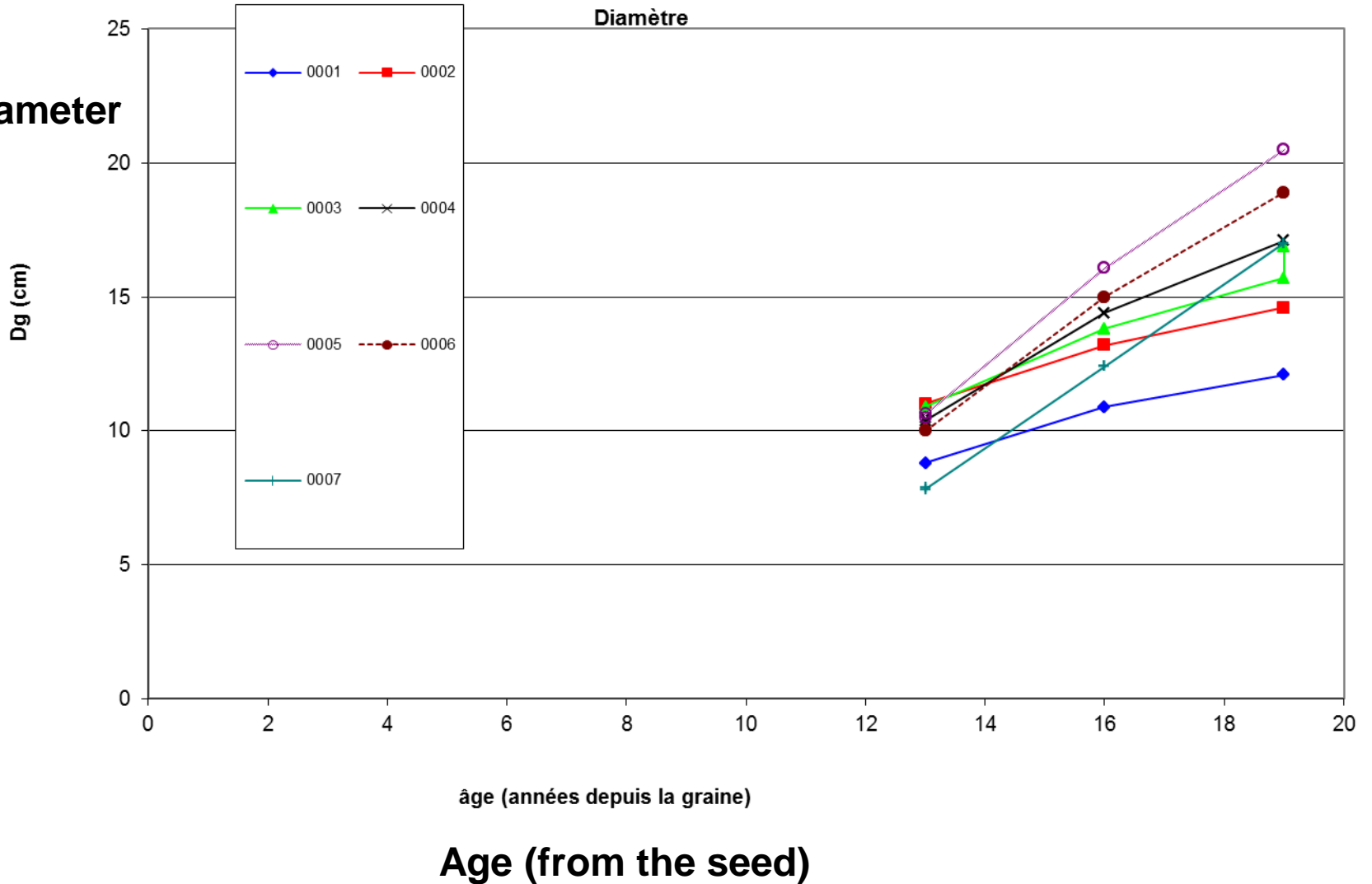


Age (from the seed)

Trees/ha

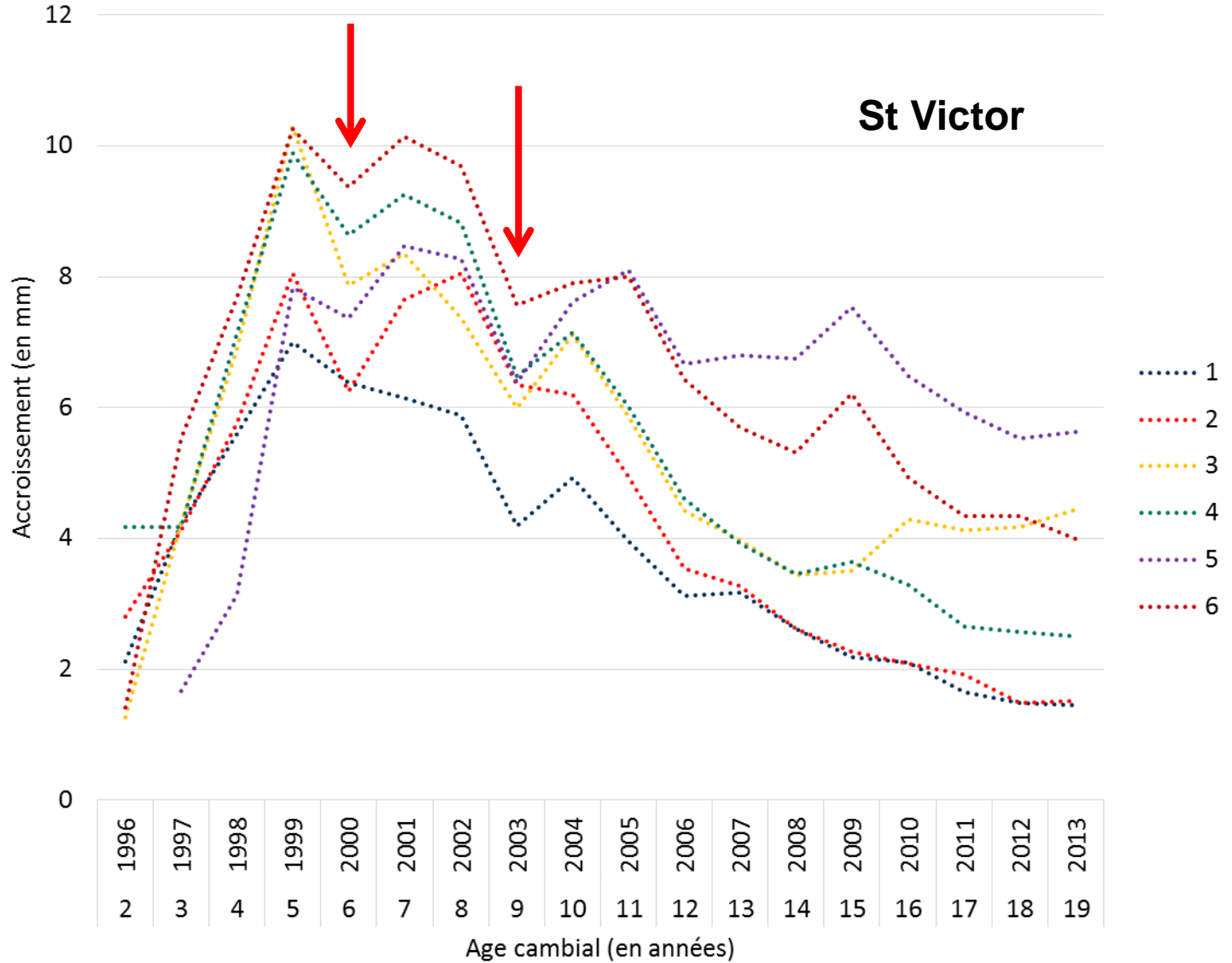


Diameter





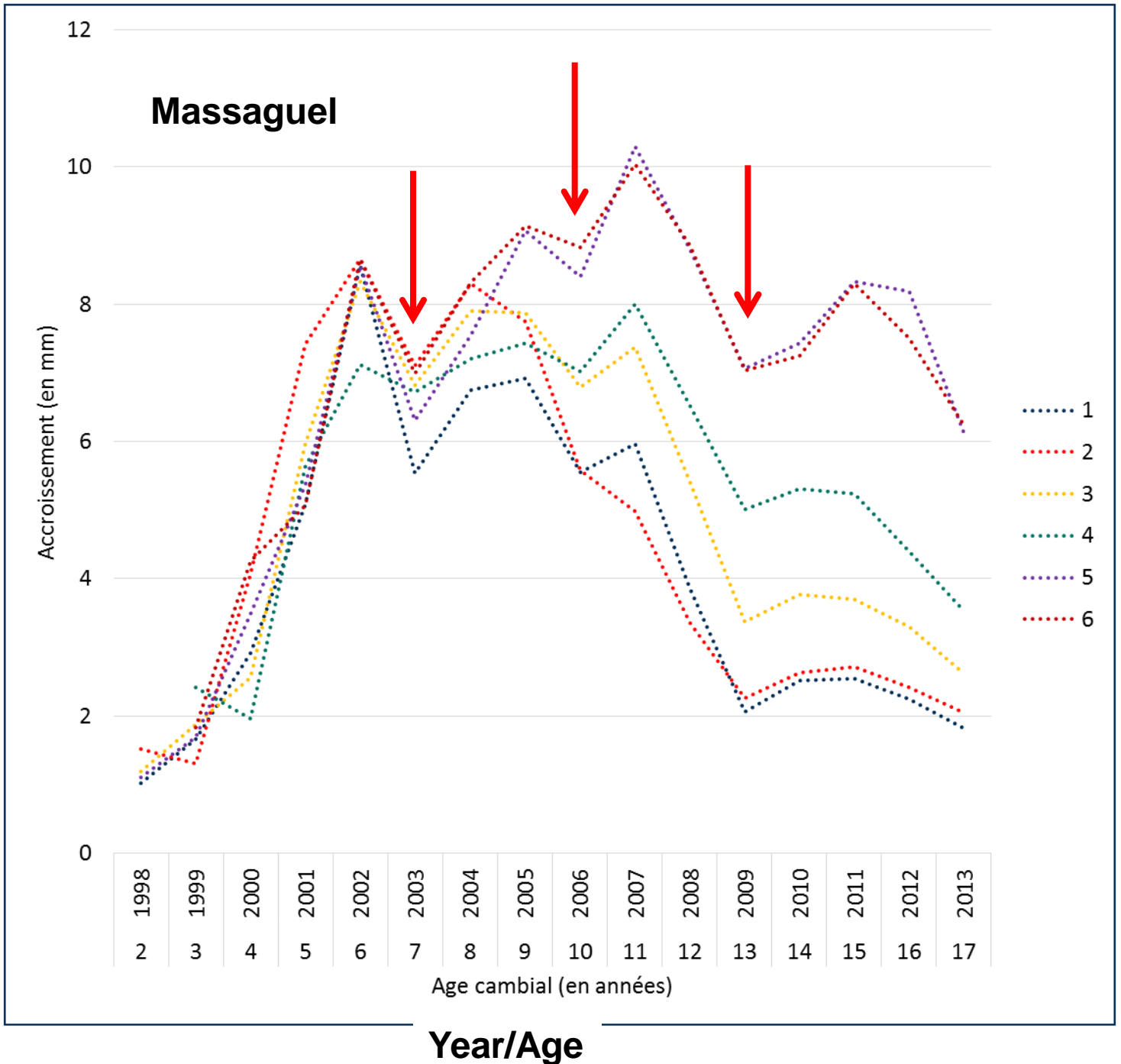
ID (mm)



Year/Age



ID (mm)

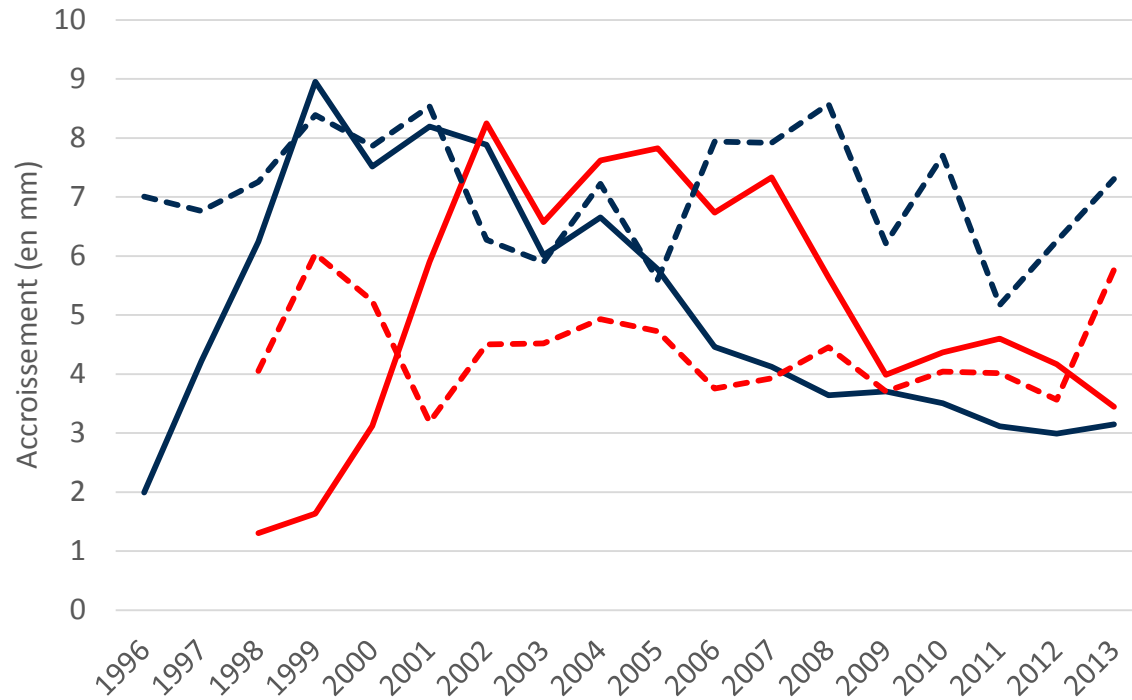




ID (mm)

Precipitations (total /year)

Moyenne de I Moyenne de RR



Cumule des précipitations (en mm)

1000 mm

500 mm

Essai
Valeurs
— 23035 - Saint-Victor - Moyenne de I
— 81065 - Massaguel - Moyenne de I
- - - 23035 - Saint-Victor - Moyenne de RR
- - - 81065 - Massaguel - Moyenne de RR

mil



Merci de votre attention !