

Vineyards and climate change



Bernard Seguin

Mission 'Changement climatique et effet de serre'

INRA Avignon (France)



Summary and conclusions 1

- Vine cultivation is closely related to climate on a global scale
- Wine production is also closely related to climate on a local scale (terroir)
- So that vine could be considered *a priori* as one of the most sensitive to climate change by the simple use of basic climatic indices
- with possible extensions in new areas (England, Denmark, etc..)
- but also the projection of significant changes to the traditional adaptation of cultivars to local soil and climate within the long-experienced terroirs (in Europe, and especially France)

A true threat or an irresponsible joke ?



Summary and conclusions 2

- The recent warming has almost fully demonstrated the validity of previous expectations, in terms of phenology (significant advances in flowering and harvest dates, up to three weeks/ one month in the last 50 years) and of quality components (increase of alcohol by 2°, decrease of acidity)
- Up to now, these observed changes are rather favourable (warm summer, good wine), but we are now approaching from the optimum, as demonstrated by the case of the exceptional summer of 2003
- For a warming of about 2°C, a combination of local adjustments could counteract the effect of warming for keeping the typicality of the traditional 'terroirs'
- If more, and clearly for the hypotheses around 4-5°C, it will be necessary to adapt by changing the cultivars or the location.

It would mean the end of historical terroirs !