

Supplementary material to:

Battaglini A, Barbeau G, Bindi M, Badeck FW (2008) European winegrowers' perceptions of climate change impact and options for adaptation. Regional Environmental Change DOI 10.1007/s10113-008-0053-9

The survey has been done in South Africa by **Valérie Bonnardot**

The South African sample

In the first quarter 2003 we have had the possibility of distributing an adapted version of the questionnaire to a limited number of winegrowers in South Africa with the support of ARC, Institute for soil, climate and water, Stellenbosch. Before distribution the questionnaire has been modified to reflect the South African reality with regard to wine qualities. The 23 answers we have received have been sent from different wine regions among which Robertson (7 answers) and Stellenbosch. (6).

Despite the small amount of replies, the answers clearly suggest that viticulture is rarely dealt as a hobby but rather represents the main source of income. Indeed the size of the vineyards is bigger than in the European sample. The majority of the respondents (9) have reported a size of over 25 hectares, while only 1 winegrower has declared to have a vineyard with less than 10 ha. The smallest vineyard of our sample is 5,2 ha in size, bigger than the German national average. Probably due to the bigger size of vineyards in our sample there are only plurivariety and in all case a mixture of white and red varieties have been listed. This reflects the major effort of the South African wine industry to adapt to market demand and introduce and increase red variety in their product portfolio.

With respect to quality we were surprised to find that the majority of the wines produced in our sample are of the lowest quality, the *Basic* one (over 41 % of total production).

	Basic	Premium	Super Premium	Ultra Premium	Icon
Sample	41	26	23	9	1
Country statistics	50	34	10	5	1

Table 8: wine production divided by quality as percentage of total

The results shown in the above table are similar to the national statistics according to which the production of Basic

wine accounts for the majority of the country total production (wynboer: <http://www.wynboer.co.za/recentarticles/0100logistics.php3>).

The majority of the winegrowers (19) have noticed climate change and have generally described the changes as warmer temperatures and less rain.

The majority has also indicated that climate changes have an impact on quantity 13/23, quality 18/4 and pests and diseases 15/8.

In all cases the impact is described as negative. Shortage of water supplies and sunburn are among the most mentioned causes for a decrease in quantity and quality; while the impact of climate change on pests and diseases is described as an increase in a number of pests and fungi and the need to spray more often. As in the Italian sample, winegrowers have noticed an increase in the presence of ants.

The economic consequences of the climate changes are reported to be negative (16 negative answers), only 4 winegrowers thought that the influence was positive and the rest did not reply to the question. On the other hand the winegrowers in our sample seem to be more confident about the influence of global changes on their wine business (question 10), with 15 positive answers, 5 negative, 2 NA and 1 winegrower answering "I don't know".

12 winegrowers have declared to be willing to change varieties in case the ones grown become unsuitable, 8 have replied in a negative way, 1 did not know and the remaining 2 did not answer the question. Without climate change only 8 winegrowers have declared to be planning to use other varieties, mainly for economic reasons and to follow market demand. The remaining 15 replied negatively.

12 winegrowers declared to be informed about climate changes, by media, neighbours and weather stations; the remaining 11 are not informed.

All of the 23 would like to get information about the impact of climate change on viticulture.

Our South Africa sample is 100% male.