Properties of Vineyard soils of the Yass Valley, NSW: the role of Aeolian dust accessions

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Terroir is a term used to define the features of a wine growing region in terms of its climate, geology, topography and soils. There is an increasing interest in the overall role of soil properties in determining the productivity of vineyards and hence the quality of their wines.

This paper discusses soil properties in the vineyards of the Murrumbateman wine region situated in the Yass River Valley of NSW. Vineyard soils in this area are largely derived from dacite geology. The rocks have weathered to form soils ranging from well drained deep red chromosols through to imperfectly drained yellow chromosols and tenosols.

There is also evidence for a contribution of windblown (aeolian) fine silt to the development of vineyard soils in the region. These aeolian deposits (also named "parna" by Butler and Hutton (1956)) which overlay the parent geology are thought to improve the water holding capacity, drainage and fertility of vineyard soils. Previous studies (Melis and Ackworth 2001, Walker et al. 1988) have also highlighted the importance of aeolian deposits in soils of the Yass Valley.

This paper presents evidence for this parna material in terms of a range of soil physical and chemical properties characteristic of a number of typical soil types. In particular detailed particle size data will be presented for each of the soil types to validate the presence/absence of Aeolian inputs.

Finally this paper discusses soils in other wine regions which also are recognized as having Aeolian inputs and the range in soil properties imparted by these inputs.