INTRODUCTION

The importance of the soil for viticulture is becoming increasingly recognized, since several factors that influence grape and wine quality are related to soil properties. Soil surveys allow to identify soil types of an area and to characterize their physical and chemical properties, as well as to delineate the occurrence of each soil type to produce maps (Hudson, 1992). Since the mapping scale determines the smallest mappable soil unit size, it must be taken into account when using soil survey information for purposes like management of wine quality.

The main objective of this study was to evaluate the context of vineyards in relation to soils using soil surveys at two different scales in the Vale dos Vinhedos Denomination of Origin (DO), wine production zone Serra Gaúcha, Rio Grande do Sul, Brazil. The second objective was to discuss how the increase in detail of soil surveys may help vine growers and the wine industry to improve wine quality and typicity in this region.

MATERIAL AND METHODS

Study area:

Vale dos Vinhedos Denomination of Origin (DO), wine production zone Serra Gaúcha, northeast of State Rio Grande do Sul, Brazil (Figure 1)

Total acreage of 7,244.8 hectares

Climate subtropical with mild summer, Köppen’s Cfb type

Complex relief, with large variations in elevation, slope and aspect

Several soil types, with a relative predominance of shallow and stony soils

CONCLUSIONS

The detailed soil survey showed that variability of soil conditions in the Vale dos Vinhedos DO is higher than that previously observed with a semi-detailed survey. Such larger variability means that soil information can help to increase knowledge about the characteristics of the terroir and to understand how such characteristics affect wine quality. Therefore, it is possible to conclude that, based on soil information, much more can be done to improve the wine quality of the Vale dos Vinhedos DO.