

Soil -2014-45- Response to the reviewers

Analysis and definition of potential new areas for viticulture in the Azores (Portugal)

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Answers to the Editor's comments (12 Jun 2015):

1 - The approach you use is that of the so-called "natural terroir units" (Laville, P. (1993). *Unite's de terroir naturel et terroir. Une distinction ne'cessaire pour redonner plus de cohe'rence au syste`me d'appellation d'origine*. Bull. O.I.V., 745–746, 227–251; Priori, S., Barbetti, R., L'Abate, G., Bucelli, P., Storchi, P., and Costantini, E. A. C. (2014). *Natural terroir units, Siena province, Tuscany*, Journal Maps, 10, 466–477) you should make reference to it.

Response: references were made (lines74-75).

2 - Add a table with functional soil parameters and suitability classes (likewise you did for climate), in particular, drainage, AWC, depth to bedrock, and pH, that you mention at line 109 (see for instance Bucelli, P., Costantini, E.A.C. (2009) *Wine Grape and Vine zoning. Manual of methods for soil and land evaluation*. Costantini, E.A.C. (Ed.), Science Publishers, Enfield (NH), (USA), 353-400. ISBN 978-1-57808-571-2).

Response: Table 2 - Functional soil parameters and suitability classes of the potential new areas for viticulture in the Azores and Table 3 - Areas (ha) of the suitability classes for viticulture in the islands of S. Miguel, Terceira, Faial and Graciosa (Azores), were added. Text, lines 241-245.

3 - Add a map of existing vineyards and DOC limits.

Response: Added map of Figure 4 - Distribution of the existing traditional vineyard areas and DOC limits in the Azores islands. Text, lines 234-240.

4 - Compare suitability of existing DOC and potential new terroirs.

Response: comments in text, 234-240.

5 - Complete table 1 with the functional soil parameters (like stoniness, gravel, skeleton, depth to bedrock).

Response: additions were made to Table 1 of the existing recorded parameters.

6 - In the conclusions, mention that future research activities on viticultural and oenological results are needed to check the wine suitability of the delineated candidate terroirs (i.e. natural terroir units).

Response: mention was included in text, lines 361-362.