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Professor Bojie Fu,
Editor-in-Chief
Geography and Sustainability

Dear Professor Bojie Fu,

**Submission of Manuscript for Consideration by
Geography and Sustainability**

We wish to submit a new manuscript entitled “*The influence of resource use on yield versus quality trade-off in Australian vineyards*” for consideration by Geography and Sustainability.

In this manuscript we observe a trade-off between the quality and quantity of grapes produced in the Australian winegrowing industry. Furthermore, we illustrate how this trade-off relates to invested natural resources and different winegrowing regions. The sustainability of favouring greater yield over quality is discussed reviewing the economic and environmental risks involved in the production of lower quality grapes at greater yields. This study was possible due to new, extensive nationwide data that had been collected for over a decade by Sustainable Winegrowing Australia. The data collected included water, fuel and electricity use; as well as vineyard size, sales prices, harvest year and region. Using this data we constructed several models, favouring regression techniques for the explainability and easy interpretation of relationships between variables. In total, we created five final models illustrating the relationships and multifaceted nature of vineyard management. We were able to emphasise that quality was not solely related to the overall expenditure of resources but rather to efficient management, as well as regional and seasonal variations.

We believe that this manuscript is appropriate for publication by Geography and Sustainability as it provides new insights into the geographical differences in Australian winegrowing regions. As well as showing the sustainability of different winegrowing production strategies. These concepts linked together illustrate the relationship between human interaction and their environment as driven by agricultural management strategies and the resources required to achieve the necessary outcomes to maintain economic sustainability using environmental resources. We confirm that this work is original (created in partial fulfilment for the Doctor of Philosophy degree), has not been published elsewhere, nor is it currently under considerations for publication elsewhere. Thank you for your consideration of this manuscript.

Sincerely ,
Bryce Polley,
Corresponding Author, Queensland University of Technology