



FACCE-MACSUR

Modelling different cropping systems

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Abstract/Executive summary

Grapevine is a worldwide valuable crop characterized by a high economic importance for the production of high quality wines. However, the impact of climate change on the narrow climate niches in which grapevine is currently cultivated constitute a great risk for future suitability of grapevine. In this context, grape simulation models are considered promising tools for their contribution to investigate plant behavior in different environments. In this study, six models developed for simulating grapevine growth and development were tested by focusing on their performances in simulating main grapevine processes under two calibration levels: minimum and full calibration. This would help to evaluate major limitations/strength points of these models, especially in the view of their application to climate change impact and adaptation assessments. Preliminary results from two models (GrapeModel and STICS) showed contrasting abilities in reproducing the observed data depending on the site, the year and the target variable considered. These results suggest that a limited dataset for model calibration would lead to poor simulation outputs. However, a more complete interpretation and detailed analysis of the results will be provided when considering the other models simulations.

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