



Sustainability of pasta production under future climate in Central Italy

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In this paper, the impact of future climate on pasta green water footprint (WF) was assessed. The model DSSAT CERES-Wheat was applied to simulate the production of rainfed winter durum wheat in Val d'Orcia (Central Italy), which provides the raw material for making traditional Italian pasta. The model was calibrated and validated for a 15-years period and used to estimate wheat yield and grain green WF. Further, the processing of grain for pasta making was analysed and taken into account for the calculation of the WF of final product. Then, the model was applied on future climate scenarios created with the stochastic generator LARS-WG, starting from a set of ENSEMBLES scenarios. The trend of wheat WF was analysed and the sustainability of the production of pasta in Central Italy was investigated and discussed.