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Analysis of the impact of climate change on maize (*Zea mays*) yield in Central Ethiopia

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Climate change refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or variance of its properties and that persists for an extended period, typically decades or longer. In Ethiopia; maize production in relation to climate change at regional and sub- regional scales have not been studied in detail. Thus, this study was aimed to analyse impact of climate change on maize yield in Bako and Ambo Districts, Central Ethiopia. To this effect, weather data, soil data and maize experimental data for BH660 hybrid were used. APSIM software was used to investigate the response of maize (*Zea mays*) yield to different agronomic management practices using current and future (2020s-2080s) climate data. The climate change projections data which were downscaled using SDSM were used as input of climate data for the impact analysis. Compared to agronomic practices the impact of climate change on BH660 in Central Ethiopia is minute. However, within 2020s-2080s in Ambo area; the yield of BH660 hybrid is projected to reduce by 0.88% to 1.4%. While in Bako area; it is projected to increase by 1.3% to 3.5% in 2050s and 2080s. Thus, to adapt to the changing climate; farmers should consider to increase plant density and fertilizer rate per hectare.

Biography

Takele Nemomsa has completed his MSc in Environmental Science at the age of 32 years in 2014 from Ambo University. He is doing research on climate-crop modelling in Ethiopia.

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