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Interannual variations in ecosystem carbon fluxes of a maize crops system.

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The eddy correlation technique was used to investigate the influence of biophysical variables on ecosystem carbon fluxes of a maize crop system across 6 growing seasons (2004-2009) at IT-Bci in Southern Italy (Eboli, Italy), a candidate class 1 ICOS cropland site. Interannual variation in GPP and Reco was chiefly dependent on crop management, as GPP was a direct function of applied water and fertilizer. The seasonal variability in GPP was mainly explained by variation in LAI (50 %), followed by air temperature (37 %), incoming radiation (11 %) and soil water content (2 %). Reco was positively influenced by LAI (65 %), followed by soil temperature (11%), so that a higher contribution of the autotrophic component to total ecosystem respiration is hypothesized.