

## Low Maize Yield Associating to Low RUE Resulted from Lower Daily Temperature During Reproductive Stage

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### 1. Letter to Editor

We demonstrate a large effect of temperature on maize grain yield. There was a smaller variation of the daily temperature and radiation in reproductive stage than in vegetative stage. Lower daily temperature rather than lower daily radiation in reproductive stage was responsible for the yield and biomass reduction. Crop's efficiency in converting solar radiation into biomass (i.e. radiation use efficiency, RUE) was associated with the difference in daily temperature. We concluded that lower maize yield was associated with lower RUE, which was due to the fact that lower daily temperature in reproductive stage reduced the crop growth rate and biomass production. Our results suggested the crop adaptation strategies for global climate changes should focus more on adjusting sowing date and crop establishment in reproductive stage in Yellow- and Huaihe-River Reaches in China.

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