作物学报 2003 29 (3): 349-352 ISSN: 0496-3490 CN: 11-1809/S

研究论文

引种到青藏高原大田的玉米叶片中磷酸烯醇式丙酮酸羧化酶活性的日变化

杨甲定

中国科学院寒区旱区环境与工程研究所,甘肃兰州,730000

收稿日期 2002-4-23 修回日期 2002-9-1 网络版发布日期 接受日期

摘要 引种到青藏高原大田的玉米,其拔节期的全天光合进程中,叶片中磷酸烯醇式丙酮酸羧化酶(PEPC)活性总是大于相应时间点的净光合速率(Pn),且全天变化幅度较Pn缓和.通过研究PEPC活性和Pn之间差异的全天变化,分析了环境因子(如光强、气温)和气孔状态对光合作用的影响.

关键词 玉米 青藏高原 磷酸烯醇式丙酮酸羧化酶

分类号 Q945.11

Diurnal Changes of Phosphoenolpyruvate Carboxylase Activity in Leaves of Field-grown Maize Introduced into Tibetan Plateau

Yang Jiading

Abstract In the day course of photosynthesis of maize introduced into Tibetan Plateau, during its jointing stage, the phosphoenolpyruvate carboxylase(PEPC) activity in photosynthetic leaves undulated more gently and was always higher than the net photosynthetic rate(Pn) at every time point. By studying the variation of difference between Pn and PEPC activity throughout the day, the influence of environmental factors(e.g. light intensity and ambient temperature) and stomatal status on photosynthesis was analysed.

Key words Maize Tibetan Plateau Phosphoenolpyruvate carboxylase

DOI:

通讯作者 杨甲定 yangjiading@sina.com