

耕作栽培·生理生化

野外连续两年增强UV-B辐射对8个割手密无性系叶片MDA含量的影响*

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摘要 研究了大田栽培和自然光条件下, 连续两年模拟UV-B辐射 (280~315 nm, 5.00 kJ/m²) 增强对8个割手密无性系叶片丙二醛 (MDA) 含量的影响。UV-B辐射对割手密叶片MDA含量有显著的影响, 8个割手密无性系叶片MDA含量对增强UV-B辐射存在种内差异。5个无性系叶片MDA含量有明显增加的趋势, 分别为I91-97, I91-38, II91-116, 93-25, 90-22; 1个无性系MDA含量变化不明显 (II91-93), 2个无性系MDA含量有降低的趋势, 分别为II91-98, 92-11。UV-B辐射对割手密叶片MDA含量的影响具有年际间差异。UV-B辐射对割手密叶片MDA含量的影响存在生育期之间的差异, 为伸长期>成熟期>分蘖期。

关键词 [割手密](#); [UV-B辐射](#); [丙二醛](#); [种内差异](#)

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Effect of Enhanced Ultraviolet-B Radiation on MDA of 8 Wild Sugarcane (*Saccharum spontaneum* L.) Clones under Field Conditions for Two Consecutive Years

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Abstract

Field studies were conducted to test the effect of enhanced ultraviolet-B (UV-B, 280~315 nm, 5.0 kJ/m²) radiation on the MDA contents of eight wild sugarcane clones under field conditions in 2003 and 2004. The UV-B radiation had significant effect on MDA contents of eight elongation of wild sugarcanes. Intraspecific responses of 8 wild sugarcane clones to enhanced UV-B radiation were observed. Increase in MDA contents of 5 wild sugarcane clones (I91-97, I91-38, II91-116, 93-25, 90-22), No change in MDA contents of II91-93 and decrease in MDA contents of 2 wild sugarcane clones (II91-98, 92-11) was observed. The response difference was obvious between 2003 and 2004. Response sensitivities of MDA contents of 8 wild sugarcane clones to UV-B radiation in different stages had the following sequence: elongation > ripening > tillering both in 2003 and 2004.

Key words [wild sugarcane \(*S. spontaneum* L.\)](#) [UV-B radiation](#) [MDA intraspecific responses](#)

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