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[1]李馨园,王守义,王淑荣,等.根瘤菌配施胶质类芽孢杆菌对大豆叶绿素荧光特性、产量及品质的影响[J].大豆科学,2014,33(04):541-544,549.[doi:10.11861/j.issn.1000-9841.2014.04.0541]
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根瘤菌配施胶质类芽孢杆菌对大豆叶绿素荧光特性、产量及品质的影响

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Title: Effect of Rhizobium Combined with Pambacillus mucilaginosus on Soybean Chlorophyll Fluorescence Characteristics,Yield and Quality

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摘要: 以常规施肥为对照, 研究根瘤菌和胶质类芽孢杆菌不同比例配合施用对黑龙江西部干旱地区大豆开花期荧光特性、产量及品质的影响。结果表明: 两种菌剂配合施用, 能够提高光合能力, 增加产量, 其中根瘤菌和胶质类芽孢杆菌各施用150 mL?hm⁻²为最优处理, 与对照相比, 该处理叶绿素含量显著变化, Chla增加68.12%, Chlb增加87.51%, Chla/b比值降低10.32%; Fv/Fm和Fv/Fo值分别比对照提高1.82%和7.59%, qN值低于对照6.25%; 蛋脂总量较对照增加4.01%, 产量高于对照19.10%, 与其他处理差异显著。

Abstract: The effect of different proportion combined application of Rhizobium and Pambacillus mucilaginosus on the soybean yield and chlorophyll fluorescence characteristics at florescence in the western arid area of Heilongjiang province was studied with conventional fertilization as control. The results showed that it could improve the photosynthetic capacity and increase the yield for using combined two kinds of bacteria fertilizer. The best combined ratio of using Rhizobium and Pambacillus mucilaginosus fertilizer was 150 mL?ha⁻¹ to 150 mL?ha⁻¹. Comparing to conventional fertilization application the content of Chla and Chlb increased to 68.12% and 87.51% respectively under the treatment, while the ratio of Chla/b decreased by 10.32%. It also presented significant changes as the Fv/Fm and Fv/Fo values increasing by 1.82% and 7.59%, the qN value lowered by 6.25%, total amount of protein and fat increasing by 4.01% and the yield higher 19.10% than that of the control.

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