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[1]孟庆英,张春峰,于忠和,等.根瘤菌对大豆根际土壤微生物及大豆农艺性状的影响[J].大豆科学,2012,31(03):498-500.
[doi:10.3969/j.issn.1000-9841.2012.03.035]
MENG Qing-ying,ZHANG Chun-feng,YU Zhong-he,et al.Effects of Rhizobia on Rhizosphere Soil Microorganisms and Agronomic Characters of Soybean[J].Soybean Science,2012,31(03):498-500.[doi:10.3969/j.issn.1000-9841.2012.03.035]

点击复制

根瘤菌对大豆根际土壤微生物及大豆农艺性状的影响

《大豆科学》 [ISSN:1000-9841 /CN:23-1227/S] 卷: 第31卷 期数: 2012年03期 页码: 498-500 栏目: 出版日期: 2012-03-25

Title: Effects of Rhizobia on Rhizosphere Soil Microorganisms and Agronomic Characters of Soybean

文章编号: 1000-9841 (2012) 03-0498-03

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关键词: 大豆 (KeySearch.aspx?type=Keyword&Sel=大豆); 土壤微生物 (KeySearch.aspx?type=Keyword&Sel=土壤微生物); 根瘤菌 (KeySearch.aspx?type=Keyword&Sel=根瘤菌); 产量 (KeySearch.aspx?type=Keyword&Sel=产量)

Keywords: Soybean (KeySearch.aspx?type=Keyword&Sel=Soybean); Soil microorganisms (KeySearch.aspx?type=Keyword&Sel=Soil microorganisms); Rhizobia (KeySearch.aspx?type=Keyword&Sel=Rhizobia); Yield (KeySearch.aspx?type=Keyword&Sel=Yield)

分类号: S565.1

DOI: 10.3969/j.issn.1000-9841.2012.03.035 (http://dx.doi.org/10.3969/j.issn.1000-9841.2012.03.035)

文献标志码: A

摘要: 为研究施用根瘤菌条件下,大豆不同生育期土壤中微生物数量的动态变化及其对大豆农艺性状的影响,于大豆苗期、花期、结荚期、鼓粒期、成熟期分别对大豆根际土壤细菌、真菌、放线菌采用平板计数法进行数量测定;于大豆成熟期对大豆农艺性状及产量进行测定。结果表明:大豆根际土壤微生物数目随大豆生育期不同而发生变化。与对照相比,根瘤菌的施用均增加了除花期外各时期土壤中细菌的数量,在结荚期、鼓粒期和成熟期,增加了土壤真菌数量,在结荚期和成熟期增加了土壤放线菌数量;根瘤菌的施用增加了大豆的株高、主茎节数、单株荚数和单株粒数,且有效增加了大豆产量,与对照相比增产19.44%。

Abstract: The objective of this study was to investigate the effects of applied rhizobia on dynamic of rhizosphere soil microorganisms and agronomic characters of soybean. The numbers of bacteria, fungi, actinomycetes of rhizosphere soil at seedling, flowering, podding, seed filling and mature stage of soybean were determined through colony counting method. Rhizobia increased bacteria number at tested stages of soybean except flowering, and increased fungi number at podding, seed filling, mature stage, and increased actinomycetes number at podding and mature stage of soybean. Rhizobia improved plant height, main stem nodes, pods per plant and seeds per plant, hence, increased seed yield by 19.44%.

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备注/Memo 基金项目: 国家“十二五”大豆产业技术体系项目(CARS-04-10B)。

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更新日期/Last Update: 2014-08-17

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