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作者: 王媛媛 (KeySearch.aspx?type=Name&Sel=王媛媛); 段玉玺 (KeySearch.aspx?type=Name&Sel=段玉玺); 陈立杰 (KeySearch.aspx?type=Name&Sel=陈立杰)

沈阳农业大学植物保护学院线虫学研究室, 沈阳 110161

Author(s): WANG Yuan-yuan (KeySearch.aspx?type=Name&Sel=WANG Yuan-yuan); DUAN Yu-xi (KeySearch.aspx?type=Name&Sel=DUAN Yu-xi); CHEN Li-jie (KeySearch.aspx?type=Name&Sel=CHEN Li-jie)

Plant Nematology Laboratory, Plant Protection College, Shenyang Agricultural University, Shenyang 110161

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摘要: 为了明确大豆根瘤内生芽孢杆菌Snb2对大豆胞囊线虫的毒性和大豆根腐病菌的抑制作用,用菌悬液处理和对峙培养法分别测定了Snb2对两种病原微生物的作用效果。结果表明: Snb2的菌悬液能够明显抑制大豆胞囊线虫胞囊的孵化,相对抑制率达到94.9%;菌悬液处理J2 96 h时死亡率达到66.7%; Snb2菌株对4种大豆根系病原真菌表现不同程度的拮抗作用,对尖孢镰刀菌和茄腐镰刀菌的拮抗作用最明显,抑菌圈达到10 mm左右,抑制作用可持续10 d;经细菌悬浮液浸种测定,处理后的大豆子叶节到根尖的距离为9.1±4.54 cm,较对照增加了15.19%,对幼苗生长有明显的促进作用;通过温室盆栽防病试验,进一步表明Snb2菌悬液进行种子浸种对大豆胞囊线虫病有明显的抑制作用,防治效果达到62.5%。

Abstract: In order to study the effect of endophytic bacteria Snb2, Bacillus sp., from soybean root on Heterodera glycines and soybean root rot pathogens, treatment J2 and cyst with bacterial suspension and Dualculture tests to soybean root rot pathogens were developed. The result showed that the bacterial suspension had effect on the hatching of cyst and the rate of inhibition was 94.9%; after 96 h, the mortality of J2 was 66.7% treated with bacterial suspension; strain Snb2 had strong anti-fungal activity to 4 soybean root rot pathogens, especially to Fusarium oxysporum, Fusarium solani, the inhibition zone was 10 mm and lasted almost ten days; after treated with bacterial, it apparently promoted the growth of soybean seedling, the length between cotyledon and root tip was 9.1±4.54 cm, 15.19% higher than that of CK; In potted trial, bacterial suspension showed obvious efficiency against soybean cyst nematode and control efficiency reached 62.5%.

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作者简介: 王媛媛(1978-), 女, 博士研究生, 主要从事线虫生物防治, E-mail: wangyy@syau.edu.cn

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